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ABSTRACT

This study investigates the post-high school influence of the In-School Neighborhood Youth Corps (NYC) on the earning capacity of participatns in Houston, Texas. The influence of NYC participation is investigated employing a methodology of a control group design together with data analyses using multiple regression and analysis of covariance. The analytical sample consists of 103 former participants in the NYC Program who left high school sometime between 1965 and mid-1971, and 39 controls. The NYC participants include 83 school year subjects for whom at least some of their NYC experience was obtained in part-time NYC employment during the academic year and 20 summer-only participants who held NYC jobs during the summer vacation period. The conclusions of this investigations include the following: (1) NYC participation does not improve the high school graduation rate; (2) the NYC influence on post-high school income is questionable; (3) the NYC influence on college attendance and long-run income prospects are questionable; (4) NYC participation does not stimulate post-high school vocational training; (5) NYC participation benefits blacks more than other ethnic groups; (6) the school year segment contributes more toward high school graduation than the summer-only segment; and, (7) income gains to NYC participants do not increase with the length of participation. (Author/JM)

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AN INVESTIGATION OF THE INFLUENCE OF THE IN-SCHOOL NEIGHBORHOOD YOUTH CORPS ON EMPLOYMENT AND EARNINGS IN HOUSTON, TEXAS

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the Faculty of the Department of Economics

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Charles John Ellard

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ABSTRACT

This study investigates the post-high school influence of the In-School Neighborhood Youth Corps (NYC) on the earning capacity of participants in Houston, Texas. Earning capacity includes both current labor force performance as well as educational attainment. The influence of NYC participation is investigated employing a methodology of a control group design together with data analyses using multiple regression and analysis of covariance.

The analytical sample consists of 103 former participants in the NYC Program who left high school sometime between 1965 and mid-1971, and 39 controls. The NYC participants include 83 school year subjects for whom at least some of their NYC experience was obtained in part-time NYC employment during the academic year and 20 summer-only participants who held NYC jobs during the summer vacation period. The controls were selected from siblings of former NYC participants in Houston.

The analysis of the sample data attempts to measure the NYC influence on post-high school earning capacity variables while controlling for several other factors. These factors include age, race, sex, marital status, parental education, and others. The investigation also probes for NYC influence for racial groups and for the sexes taken individually. Additional investigations vary the structure of the experimental

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variable and look at the influence of program component, the duration of NYC experience, the total high school employment composition and cohort groupings.

The conclusions of these investigation include the following: 1) NYC participation does not improve the high school graduation rate; 2) the NYC influence on post-high school income is questionable; 3) the NYC influence on college attendance and long-run income prospects are questionable; 4) NYC participation does not stimulate post-high school vocational training; 5) NYC participation benefits Blacks more than other ethnic groups; 6) the school year segment contributes more toward high school graduation than the summer-only segment; and 7) income gains to NYC participation do not increase with the length of participation.

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TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS iv

LIST OF TABLES v

Chapter

1. INTRODUCTION. 1

The NYC Program

The NYC Objective

NYC Program Effects

The NYC Influence

PURPOSE AND SCOPE 7

Earning Capacity Defined

The Experimental Plan

The Hypothesis

Delimitations

PLAN OF THE STUDY 12

2. METHODOLOGY 13

THE RESEARCH PLAN 13

Selection of Controls

Types of Bias

DATA COLLECTION 19

Sampling Procedure

The Instrument

The Response

Gross Tabulation

FRAMEWORK OF ANALYSIS 36

Example of Analysis Procedure

BEST COPY AVAILABLE

Chapter Page

3. ANALYSIS OF LABOR MARKET PERFORMANCE 42

EXPECTED RESULTS 43

Age

Race

Sex

NYC Status

Marital Status

Education

LABOR MARKET PERFORMANCE OF TOTAL SAMPLE 50

Race

Sex

Education

Marital Status

Age

NYC Participation

NYC PARTICIPATION WITHIN SELECTED SUBSAMPLES . . 54

NYC Status

Sex

Race

ADDITIONAL INVESTIGATIONS. 62

The Kind And Intensity of NYC Experience

SUMMARY 72

4. ANALYSIS OF EDUCATIONAL PERFORMANCE 78

EXPECTATIONS 80

NYC Status

BEST COPY AVAILABLE

Chapter Page

Sex

Race

Household Head

Age

EDUCATIONAL ATTAINMENT IN THE TOTAL SAMPLE . . . 85

Sex

Education of Head

Race

Household Head

NYC Participation

NYC INFLUENCE AND INTERACTION WITHIN SELECTED SUBSAMPLES 88

NYC Status

Sex

Race

ADDITIONAL INVESTIGATION 98

The Type and Level of NYC Experience

The Composition of High School Employment

The Cohort Effect

SUMMARY 110

5. SUMMARY AND CONCLUSIONS 113

SUMMARY OF STATISTICAL ANALYSIS 113

NYC in the Total Sample

By Sex

By Race

NYC Type and Duration

BEST COPY AVAILABLE

Chapter Page

High School Work Composition

Cohort Analysis

VALIDITY OF THE EXPERIMENTAL DESIGN 119

INTERPRETATIONS AND RECOMMENDATIONS 123

Interpretations

Recommendations

APPENDIX A

APPENDIX B

BIBLIOGRAPHY

BEST COPY AVAILABLE

LIST OF TABLES

Table		Page
1	Sample Size and Strata	22
2	Results and Disposition of the Survey Task . .	29
3	Raw Comparison of the Experimental and Control Groups.	33
4	Regression Analysis of Hypothetical Example. .	38
5	Analysis of Covariance of Hypothetical Example	40
6	Analysis of Labor Market Performance for the Total Sample	51
7	Analysis of NYC and Control Subsamples for Labor Market Performance	57
8	Analysis of Male and Female Subsamples for Labor Market Performance	60
9	Analysis of White, Mexican-American and Black Subsamples for Labor Market Performance	63
10	Analysis of Kind and Level of NYC Experience .	68
11	Analysis of Type of High School Work Experience.	70
12	Analysis of Cohort Groups for Labor Market Performance	73
13	Analysis of Educational Achievement for the Total Sample	86
14	Covariance Analysis of NYC Status on Educational Performance	90
15	Covariance Analysis of Sex on Educational Performance	93
16	Covariance Analysis by Race for Educational Performance	96

BEST COPY AVAILABLE

Table		Page
17	The Effect of Type and Level of NYC Experience on Educational Performance	103
18	The Effect of Composition of High School Employment on Educational Performance	105
19	Analysis of Cohort Groups for High School Graduation	107
20	NYC Coefficients for Cohort Analysis of Post-High School Educational Performance	111

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CHAPTER 1

INTRODUCTION

The past decade in the United States has been characterized by the ebb and flow of a commitment to assist low-income families in sharing the general prosperity. At the peak this commitment, which included the Neighborhood Youth Corps (NYC) one of its largest youth programs, represented an unparalleled effort in the history of social legislation. The disturbing aspect of the changing political currents is that often decisions seemed to be made without objective scientific evaluation and consultation. The purpose of this study is to attempt to measure the continuing influence of the Neighborhood Youth Corps toward improving the earning capacity of young Houstonians who have participated in the program.

The NYC Program

The Neighborhood Youth Corps is a work and training program for disadvantaged high school aged youths established under Title IB of the Economic Opportunity Act of 1964. It is administered federally through the United States Department of Labor, and locally by private non-profit and public agencies throughout the country. The NYC is composed of three segments: the In-School Program for low-income youths who are still attending school, the summer program for high school youths who are on summer vacation, and the out-of-school program for high school dropouts. This study is only concerned with the in-school and summer NYC programs. These programs are usually

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administered jointly under the same sponsorship and are aimed at providing the following features.

(1) The In-School Program provides youths from low-income families with a job and income, providing they remain in school. The summer jobs terminate before school resumes in the Fall and youths are encouraged to return to school (dropout prevention).

(2) The programs provide youths with basic work experience in order to gain a sound outlook about work and habits of cleanliness, punctuality and fair play which will help them get along in the work environment (work experience).

(3) The NYC provides jobs in a variety of low skill categories which gives the youths practice in the development of skills. The jobs provide assistance mainly to public and community service programs (meaningful work).

(4) The NYC staff counsels with the youths concerning work responsibilities, progress on the job and special problems in adjusting to the job situation. Often NYC is a point of contact for particularly distressed youths and their families who are in need of referral to other public and community services (counseling and supportive services).

The NYC Objective

The main objective of the NYC program is to improve the participant's earning capacity so that he will not be forced to remain in a life of poverty, and he will not become dependent on others. If NYC is successful in attaining this goal, both

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the participants and society benefit. The individual will be able to earn a fair share of the prosperity which is enjoyed by the majority of Americans and improve his own happiness. Our society benefits by gaining in the achievement of several interrelated goals: the elimination of the source of poverty, the elimination of the more serious causes of unemployment, the improvement of productivity of labor, and aiding youths in a more efficient transition between school and work.

NYC Program Effects

A distinction must be made between the usefulness of NYC in achieving its objective while the youth is a participant of the program and the continuing usefulness after the youth leaves the program. The former may be called the program effects of NYC, the latter the post-program effects.

The program effects are more apparent and direct. The NYC job positions are allocated to youths whose family income passes the low-income test. In this sense, anti-poverty goals are attacked; jobs go to youths whose families are in greatest need. NYC youths and their families benefit from the income. In addition, while participating in the program, NYC youths do some useful work. But it is not work that is directed by market mechanisms. Youths wages are paid out of tax dollars and are usually equal to the federal minimum wages. Consequently, the competitive equality between wages and productivity does not necessarily apply. If for most youths, wages exceed productivity rather than the opposite, the part of the wage in

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excess of the actual productive contribution of NYC work is a transfer payment. The real effect on productivity and earnings would also depend on whether the individual came to an NYC position from another job or from the list of unemployed. To the extent NYC draws youths from the latter, NYC can be said to be making a contribution toward reducing unemployment.

This study is limited to the post-program influences of the in-school NYC. Thus whatever the evaluation of the program effects are, here the measurement is in terms of improvement in post-high school earning capacity as well as longer-run contributions of the program to the desirable social goals. A complete evaluation of NYC, however, must consider the program effects as well.

The NYC Influence

The key question associated with measuring the results of participation in NYC is this: How does the NYC treatment affect the post-program performance? That is, what is the mechanism through which NYC is believed to have a continuing or lasting influence? Policy makers and program administrators involved with NYC had some notions that it would produce beneficial continuing results. Some of the NYC research has yielded valuable insights into the process. But a full explanation of post-program influence on labor market behavior has never been produced. It is only when such an explanation is developed together with observational verification that control of the process can be achieved.

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A full explanation of post-program influence of NYC on individual behavior is beyond the scope of this study since it obviously involves psychosocial factors pertaining to the human response to the NYC stimuli. However, the following four elements are believed to be part of the concept of post-program changes in the performance criteria as a result of participation in NYC.

(1) The primary acknowledged statements linking program participation with post-program behavior pertains to the influence of NYC on the potential dropout. The logic of this linkage is as follows: the poor family may be economically stranded for a variety of reasons, and in order to allow children of those families to escape they must have the opportunity to permanently increase their earning ability. But economic distress is a major cause of youths from disadvantaged families dropping out of high school. NYC will increase his chances of graduation and a completed high school education will later result in increased earnings and a wider field of employment and education options.

(2) Another post-program influence is through the desirable work habits and skills that directly carry over from NYC to a later period. The logic of this influence includes the following: basic habits of punctuality, honesty, etc., are practiced and encouraged in NYC work. Also, some useful skills are developed and practiced in some NYC jobs. The longer useful work habits are repeated and job skills practiced, the deeper they become ingrained in the job performance of the

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youths. With such habits and skills, youths are more attractive to employers in the post-program period. They are more likely to find and remain on the better paying jobs.

(3) The NYC, especially if it provides the youth with quality supervision in his first real job experience, serves as a basic learning experience toward voluntary employment arrangements as a way of life. That is, the NYC provides the youth with certain rewards for which he is required to perform certain tasks. The rewards are both psychic and monetary. The former includes meaningful work, socialization with co-workers and expert guidance. The latter not only includes the dollar value of earnings, but its transfer into consumption as well as whatever status it provides in his family or among his peers. The youth may also learn that the rewards improve the better he accomplishes the tasks. Since rewarded behavior patterns have a greater likelihood of being repeated in the future, the NYC youth is more likely to seek out similarly rewarding positions in the post-program period rather than spend time in idleness or illegal activity.

(4) The NYC work activities and counseling help improve the youths' achievement motivation. The achievement motivation of youths is improved for a variety of reasons: a successful work experience will improve his self-image and confidence, the NYC earnings may give him more status and responsibility in the family setting, it may provide him with a new higher consumption level to maintain, the NYC position may entail association with counselors and supervisors who are professionals

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and provide a subject for emulation outside the family and classroom, and so on. Improved achievement motivation is translated into post-program behavior through firming up his occupational aspirations and his propensity for investment in himself. The former would lead to a more vigorous pursuit of the desired occupation. The latter includes the recognition that earning long-run gains often involves current sacrifice, that is a more sophisticated deferred gratification understanding. This includes the higher long-run gains to vocational and college education, as well as accepting a job with a future rather than a dead end job with an income.

PURPOSE AND SCOPE

The major problem of this study is to determine the influence of NYC on post-high school earning capacity. The determination is attempted by studying the work history and educational achievement of two groups of Houston youths - one with NYC experience and another without such experience. The study and comparison of the two groups involved several activities: the construction of an interview schedule, the random selection of subjects from both groups, the assembling of the data, and the statistical analysis. The statistical analysis provided estimates of NYC influence while controlling for other factors as well as several tests of significance that are useful in making judgments about the major problem.

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Earning Capacity Defined

The earning capacity of post-high school aged youths is most directly measured by observing their labor market including their earnings and unemployment records. In addition, capacity to earn is often improved through skills and abilities acquired with additional education. Thus, the term earning capacity in this study is operationally defined according to the following performance criteria: (1) total post-high school earnings, (2) average monthly post-high school earnings, (3) the percent of time in the post-high school period the youth was unemployed, (4) whether or not the youth graduated from high school, (5) whether or not the youth ever attended college, and (6) whether or not the youth ever attended any other post-high school training aimed at improving marketable skills. Earning capacity is improved whenever earnings are increased, unemployment decreases or educational pr[illegible]sities increase. There are many factors that contribute to improving earning capacity.

The Experimental Plan

Part of the major problem is to isolate the NYC influence from other determinants of post-high school earnings, unemployment and education. The main ingredient in the problem of isolation is the control group design. The selection of the control group is important to the success of this design. In this study siblings of former NYC participants were used as controls. These siblings were carefully screened to

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insure they never were employed in the NYC program. Further, in order to improve the control group plan, which insists that the two groups be similar in all fundamental respects except NYC participation, the sample selection process required proportionality between the groups on four controlled variables. These were age, sex, race and location within the city.

Another important ingredient in the experimental plan is the use of multivariate statistical methods to organize the data analysis. Information obtained from the two groups included the following: age, sex, race, marital status, education level, the relation of the head of the family during high school, the education level of the head of the family, subject's high school work experience and other information relating to earning capacity. Multivariate methods are important to the experimental plan by providing estimates of the influence of NYC on the performance criteria while holding the influence of these other variables constant. Also, these statistical methods provide tests of significance for finding similarities and differences in the data. This study uses multiple regression and analysis of covariance to systematically search the data for information important to the main problem.

The Hypothesis

The main hypothesis of this study is that NYC improves the post-high school earning capacity of participants. The operational test for the acceptance of this hypothesis is

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that the regression coefficient representing NYC's contribution to a labor market or educational performance, allowing that other factors share meaningfully in the total explanation of performance, is significant in the direction of improvement. Thus, in order for NYC to be considered successful, it must yield a net improvement in post-high school earnings, a reduction in post-high school unemployment, an increase in high school graduation rate, an increase in the rate of college or vocational attendance - other things held constant. The more of these criteria NYC improves, the more evidence there is to affirm the hypothesis (in this study the acceptable level of significance is 90%). This hypothesis presumes that NYC participation works through the mechanisms described earlier, i.e., through improved education if NYC delayed or prevented dropping out of high school, through a carry over of desirable work habits and specific skills, through learning the rules in an exchange economy and/or through improved desire to achieve.

In addition to the main hypothesis, several additional questions are examined:

(1) Does NYC participation benefit females more than males?

(2) Does NYC participation benefit blacks and Mexican-Americans more than whites?

(3) Is participation in the school-year program more effective in improving post-high school performance than summer-only participation?

(4) Does the length of NYC participation result in additional gains in post-high school performance?

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(5) How does NYC participation compare with other private sector high school work experience in improving post-high school labor market and educational performance?

(6) How does NYC participation vary over the time period since it was started? Has it become more or less effective?

(7) How valid is the premise of the experimental design that the two groups - NYC and control are from the same population as far as measured variables are concerned?

Delimitations

This study is similar in design in many respects with the Sommers and Stromsdorfer's nationwide study of in-school NYC.[1] Indeed, this study benefited from their study; it differs and is limited in the following ways:

(1) While it is hoped that the conclusions reached here may have some generality and usefulness beyond this single locality, this study was made on youths associated with the Houston NYC program. It must be noted that the Houston labor market has enjoyed a much lower unemployment rate than the nation generally.

(2) The study was limited to the investigation of youths still residing in the Houston area. The migrants who might have been studied were not because of cost limitations.

(3) While this study views only the post-program or long run influence of NYC, that long-run influence is strictly limited by history. The NYC program started in Houston in May 1965. The program was on-going by the end of the summer in 1971 when samples were taken. Thus the maximum post-high

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[1] Gerald G. Somers and Ernst W. Stromsdorfer, A Cost-Effectiveness Study of The In-School and Summer Neighborhood Youth Corps (Industrial Relations Research Institute, University of Wisconsin, 1970).

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school time is about six years. This study has the benefit of a slightly longer time horizon compared with Somers and Stromsdorfer's.

(4) This study achieved better results in tests than Somers and Stromsdorfer that the NYC and control groups are of the same statistical population.

PLAN OF THE STUDY

The following is the plan of the study. Chapter 2 describes and evaluates the selection of the control group, the sampling procedures and response problems, the interview schedule, the raw comparison of the NYC and control groups and the statistical methods used in subsequent chapters. Chapters 3 and 4 describe the results of data analysis. Chapter 3 is primarily concerned with labor market performance and Chapter 4 with educational attainment of the subjects. In both chapters there is a review of related findings from other investigations, the multiple regression analysis of the whole sample on the respective performance variables, sub-sample analysis by NYC status, sex and race, and additional investigations of factors associated with NYC participation. These latter include the influence of the kind of NYC program the participant was in, the importance of the whole range of high school work experience on post-program behavior and cohort analysis of the temporal aspects of NYC participation. Chapter 5 summarizes and attempts to make sense out of the results.

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CHAPTER 2

METHODOLOGY

The research techniques and instrumentation are an important aspect of this study. The purposes of this chapter are: (1) to describe and evaluate the applicability of ideal control group design to the study of the effectiveness on NYC; (2) to outline the sampling techniques, the survey schedule and the response associated with the data gathering effort; and, (3) to illustrate the way multivariate techniques will be applied to the analysis of the sample data.

THE RESEARCH PLAN

The main problem of this study is to isolate the impact of the NYC program on selected earnings, educational and attitudinal performance criteria. The methodology involved with solving this problem is to arrange the collection and analysis of data in such a way as to make that isolation as efficient and error free as possible. The main ingredient in the methodology is the use of a control group design. Thus the comparison of an experimental group, which has had some NYC experience, with a control group, which has had none, is the main axis around which the research is organized.

Ideal control group design is a plan for arranging the assembly of data in two groups - one with and one without some treatment. Such a plan requires that the two groups be alike in every fundamental aspect except the treatment variable so that any differences in the performance criteria of the two

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groups can be directly attributable to the treatment itself. Thus, the intent of the plan is to use the data collection resources in such a way as to enable the researcher to make an error free conclusion about the causal role the treatment variable plays in altering performance.

Selection of Controls.

Of course most applications, including the present one, fall short of the ideal arrangement in one way or another. It is the purpose of this section to describe the strengths and weaknesses of the present application of control-group design. These considerations must be kept in mind in any attempt to draw conclusions from the data.

The experimental or NYC group was selected from the inactive files of the NYC program in Houston, Texas. NYC subjects were selected from those in this file who had met all of the income requirements of the program and who had been on the NYC payroll at least two weeks at some time between the start of the project in Houston, in the spring of 1965 until early fall of 1971. The individuals who were actively participating in NYC at that time were not included in the study since the purpose was to look at post-program influences of NYC.

The subjects in the control group were also selected from the inactive NYC file in Houston. This group was selected from the siblings of former NYC participants who apparently did not themselves participate in the program. The use of siblings as controls offered several advantages over alternative methods such as NYC waiting lists, school or low-income community sources.

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One of the advantages of sibling controls is that there is more assurance that they come from the same socio-economic population that the NYC group comes from. Consequently, retrospective income checks are not necessary. For example, if the controls were selected within the framework of neighborhood, school or waiting list, some form of screening would have to be done to insure that the families of these subjects would have passed the low-income means test that would have allowed participation in the program. But asking a young adult 19 to 23 or more years old what his parents' income was 1 to 5 or more years earlier is less reliable than the assurance that the parents at some earlier date were required to provide the NYC administrators with proof of their income status. Thus, the use of sibling controls in this study substitutes for an income check on the control subjects at the time of the interview.

Families, of course, move in and out of the formal poverty classification with changing circumstances. So, family income conditions may have been different when the NYC member was in high school compared to an earlier or later time when the possible control was in high school. Unfortunately, there is no information which would point out if this is a significant factor. It is presumed that the families of control subjects would have no trouble passing the low-income test such that these offspring also would have been able to attend NYC but did not.

Another feature about sibling controls was that they were available in sufficient numbers and were equally accessible as

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NYC participants. In this respect, sibling controls compare favorably with the skimpy waiting lists available. NYC participants typically reported having come from large families. Since family size was one of the parameters of the poverty standard local files carefully included lists of brothers and sisters in NYC file together with date of birth and other information. An added advantage was that since the files were in alphabetical order the names could be scanned in the vicinity of the NYC member to insure the brother or sister was not also a NYC participant. With this it was possible to initially screen potential controls as not being exposed to the treatment.

Types of Bias

One disadvantage in this connection is a small family bias against controls. An extreme example would be that controls could never be the only child while NYC participants could. The small family bias cannot be a very important factor in aggregate since subjects claimed an average of 6.90 children per family with a standard deviation of 2.95. And, obviously, families with fewer children would tend not to be in the low income population. If parents give more attention and affection to each child in smaller families and if such attention is related to later successes in earning capacity; then it is expected that the small family bias would favor the success of the experimental group over the control group.

Another possible disadvantage of sibling controls might be called externality bias. Thus, if non-NYC brothers and sisters were in any way affected, influenced or benefited

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by having a NYC participant in the family then they are not completely free of the treatment effect. The obvious example is the income effect. If the added NYC income helps the family through better diet, greater mobility or a number of other possible ways; then siblings here are different than would have been the case if families were untouched by NYC. Another influence might be that of an NYC participant setting an example to brothers and sisters as to the rewards of steady work. But this could occur also between nonrelated friends. Unfortunately it is not possible to properly identify the nature or magnitude of these kinds of externalities. But if externality bias exists as exemplified, it is expected to reduce the difference between controls and NYC participants. In other words it reduces the measured NYC influence on earning capacity.

The possibility of self-selection bias also exists in the current application of control group design. However, it is doubtful that sibling controls contribute more to this possibility than would some other form of selection. Self-selection bias may have either a positive or negative effect on performance. Family members, just like unrelated individuals, differ in qualities of inquisitiveness and aggressiveness. Consequently it might be that these qualities which led the participant to have found and enrolled in the NYC program may be the same qualities which enable him to perform better by selected criteria. Thus in comparing NYC participants with controls, we may be comparing two groups which are not really

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the same on the basis of these special qualities of inquisitiveness and aggressiveness and participation in NYC may have a positive influence on performance. On the other hand, there may have been some special negative qualities associated with the searching out and enrolling in NYC which contributes to poorer performance at a later date when compared with others who do not have that quality.

The dilemma presented by self-selection bias cannot be eliminated because it is unknown how to separate the special qualities. If self-selection bias is positive, the coefficient describing the effect of NYC participation would be inflated. However, if negative, the coefficient would be underestimated. The data analysis of Chapters 3 and 4 indicate that the latter is more likely. Somers and Stromsdorfer attempted to solve the problem of self-selection bias by constructing a discriminant function which predicted the probability of participation in the NYC program.[1] The highest correlate in the function was a positive answer to the question: "Have you ever heard of the NYC program?" Obviously this other variables make the index positively correlated with actual participation in the NYC program, without assurance that it is self-selection bias itself that is being measured. Furthermore, the high positive correlation between the index and actual NYC participation

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[1]Gerald G. Somers and Ernst W. Stromsdorfer, A Cost Effectiveness Study of the In-School and Summer Neighborhood Youth Corps (Madison, Wisconsin: Industrial Relations Research Institute, 1970), Chapter 5.

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quite possibly was responsible for their inability to conclude the NYC and control group were from the same population.

DATA COLLECTION

The main factors which affect the collection of data in this study include the method of sampling the interview schedule and the relative success in finding and interviewing subjects. These factors are considered in this section with particular attention to the needs of the control group design in the gathering of the data.

Sampling Procedure

The sample was selected based on some knowledge about the population, however, limitations on the availability of certain NYC data reduced the scope of the sampling. There were three sponsoring agencies for the in-school NYC covering the Houston and Harris County area. Two of these started operations in the spring of 1965, approximately nine months after the Economic Opportunity Act of 1964 was signed into law. Another started over a year later. Originally this study intended to sample all three agencies proportional to their enrollment. This study received excellent cooperation from these agencies. But in a sudden move in September of 1971, the contract of two of the agencies with the federal government was not renewed and the third agency was expanded. This event rendered access to the records of the two agencies which were closed increasingly difficult, and inclusion of subjects from these sponsors was reluctantly abandoned. Thus the study represents sampling

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only from the remaining operational agency. It should be added that this sponsor was the largest and most efficiently operated NYC sponsor; and one which served the central city area.

The NYC sponsors had kept orderly, complete and detailed files on all participants from the beginning of the program. The sampling was made on information obtained from the files of all those subjects who were not currently active in the NYC program. Three lists of information were developed from the inactive file upon which sampling was based. The lists included: (1) a complete school-year list, (2) a summer-only pool and (3) a control pool.

The school-year list was the result of a thorough screening of the inactive file and included all of the former participants who had at least two weeks on the NYC payroll during the school year, that is, from September through May. This list contained information relating to sex, race, age, location and NYC experience of the subject together with an identification code. The summer NYC experience these subjects had was included in their NYC experience. It was from this list that the in-school sample was selected and it was the proportions of characteristics of this group that provided the basis for making strata decisions for the total sample. There were 1035 school year participants counted.

The summer-only pool was a list of information identical to that described above which was also selected from the inactive file and provided the basis for selecting the summer-only

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sample. This list differed from the in-school list in that it was only a partial listing of all those qualifying for membership in this group. These were selected on a sequential basis among all the former NYC participants who had at least two weeks of NYC experience in the summer vacation period from June through August and none during the school year. There were an estimated 2611 summer-only participants in the seven years from 1965 through August 1971 upon which the study is based. Some of these had as many as three summers with NYC, most only one.

A control pool was developed similar to the summer pool; that is by selecting a sibling from a sequential search through the files of former NYC participants. Only one sibling name was taken from each file with the exception of white participants which will be explained below; and only siblings that would have been 13 to 26 years of age at the time of sampling were picked. The age limitation was used to exclude siblings that would not have had the chance to participate in NYC because they were either too old or too young. A preliminary check was also made by looking at nearby alphabetized files to see that the sibling did not have a NYC file of his own and thus would have been ineligible as a control. Similar information was recorded for this group as for the others except of course for NYC experience. It was from this pool of subjects that the control group was eventually chosen.

The information of the three files was entered into the computer and stratified random samples were selected with a

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TABLE 1 - SAMPLE SIZE AND STRATA

	SCHOOL-YEAR POPULATION (1)	SCHOOL-YEAR SAMPLE (2)	SUMMER SAMPLE (3)	CONTROL SAMPLE (4)
AGE				
Less than 20 yrs	278	43	16	30
20 to 21 years	196	30	12	10
21 to 22 years	246	45	12	23
22 to 23 years	193	27	12	12
23 years plus	122	18	7	11
	1035	163	59	96
SEX AND RACE				
White:				
Male	10	10	2	6
Female	13	13	1	16
Total White	23	23	3	22
Mexican-American:				
Male	168	30	11	14
Female	221	35	10	11
Total Mex-Am.	389	65	21	25
Black:				
Male	220	30	12	22
Female	430	45	23	27
Total Black	623	75	35	49
All Races:				
Male	398	70	25	42
Female	637	87	34	54
Total	1035	163	59	96
NYC EXPERIENCE				
None	0	0	0	96
1-6 Months	276	43	59	0
7-12 "	401	48	0	0
13-18 "	195	40	0	0
19 Months Plus	163	32	0	0
	1035	163	59	96

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specifically designed program using a pseudo-random number generator. For the school year sample the strata variables were age, sex, race, experience level and location. Within these strata a proportional sample was selected based on the characteristics of the school year list. The summer-only and control samples were selected in the same manner from the respective pool listings except experience level was not a strata variable.

Table 1 shows the sample sizes for the three groups and the school year population upon which proportions were based. The sample strata shown are age, sex,
ience. Not shown in Table 1, however, are the location strata and the within-cell sample numbers.

It was soon discovered that the number of whites in each of the samples was too small for valid inference under conditions of proportional sampling, so the judgment was made to override the computer selection of whites and include all of them. Thus a search was made and the appropriate data assembled to describe 100% of the white NYC participants both school year and summer, and all of their brothers and sisters within the desired age group. In spite of this judgment, which was the only departure from the strict proportionality of the sample, whites still comprised the smallest racial share of the total sample. The simple fact is the NYC program in the city of Houston did not enroll that many whites. Consequently, the samples somewhat over-represent white participation. Once the

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total sample was selected, including school-year, summer-only, and controls, as described above, the files were consulted again to collect all of the available information that would be useful in locating the subject in order to conduct the interview.

The Instrument

A survey schedule was assembled to meet the needs of the study and the data obtained from its use on the sample provides the basis for the conclusions of this investigation. The survey itself is characterized as a structured interview with some open ended question sequences to accommodate the peculiarities of individual labor force and educational histories. Interviews lasted one-half to one hour.

Several of the ideas of the interview schedule were borrowed from other sources and a few new techniques were attempted The author, however, is solely responsible for the assembly, development, and appropriateness of questions in the interview schedule. A complete copy of this schedule together with associated information is included in the Appendix.A.

The subjects were paid for the interview. The intention was to improve the response rate. As will be shown below, the refusal rate was quite low and this, it is believed, is the result of the payment.

The interview schedule is divided into seven segments which are listed below. The following discussion describes the nature and purpose of these segments. See the appendix for more detail

(1) High school status

(2) NYC participation

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(3) Non-NYC high school employment

(4) Current labor force status and employment in the current period

(5) Education and training since high school

(6) Formative factors

(7) Work attitude questionnaire and interviewer observations

The first segment (Q 1-11) included questions designed to determine if the subject had graduated from high school or had dropped out, or if he or she was still attending high school. Other questions related to the vocational orientation of the high school experience and the non-terminal dropout record including the labor force experience of the non-terminal dropout intervals. The second segment (Q 12-17) was needed to screen controls for nonparticipation in NYC and to insure participants recall the experience. For NYC participants there were questions on the NYC work record and on the value of the program. The third group of questions (Q 18-25) concentrated on the work experience of non-NYC jobs during high school including summer-time work and part-time work during the school year.

The fourth group (Q 26-31) was a check on the current labor force status of the subject utilizing a portion of the Department of Labor question sequence. The probe was extended to fill-in a complete account of the labor force experience from the date of the interview back to January 1, 1971. In retrospect it would have been better to fill in the labor force history all the way back to the time of the high school exit.

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However detailed employment information only on the current period--roughly one year prior to the interview--was used in order to keep the interview within a reasonable length of time and to omit perhaps less accurate information which would have been obscured by imperfect memory.

The fifth segment (Q 32-39) probed for information relating to post-high school educational efforts of the subject, including college and vocational training.

The sixth segment (Q 40-55) asked for information concerning the family background and current marital status of the subject. The session ended with the interviewer administering the 34-question George Washington University work attitude scale which the subject read and filled in himself. The interviewer was asked to respond to a few probes about the subject which required no involvement by the subject.

In addition to these seven segments there were three question-sequences or algorithms which were used as needed in the interview. These algorithms were used to obtain information about (1) a particular job, (2) a particular kind of schooling or education in the post-high school period, and (3) the labor force status or other information whenever the interviewer detected a gap in the historical record the subject was relating. It is these three question sequences which give the interview an open-ended quality.

The interviewer was required to mark answers on the questionnaire proper and to keep the work and education history

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of the subject on a separate work sheet. This work sheet has a time-line that gives a chronological employment and education record together with a referencing technique to provide additional information about particular jobs and schools. The gap algorithm mentioned above together with a visual check of the time-line provided the interviewer with assurance that the chronological record was complete.

The Response

The success in finding and interviewing the subjects sampled from the three groups in the study was influenced by a number of factors such as: the time and effort available to simply locate the subject, the mobility of the group under study, the Vietnam War, the accuracy of the NYC file, the payment to interviewees, and others. Furthermore, while the family of the individual sampled was often available the subject was reported as living out of the Houston area. Cost limitations prevented following up on these leads.

Table 2 presents an accounting of the disposition of the total number of individuals sampled in the study. The purpose of this section is to describe the factors which were responsible for achieving only a 45% successful response rate of the 319 subjects sampled.

While the response rate of total usable interviews to the total sample was rather low, the percent of usable interviews to total subjects contacted was a more reasonable 68%. This highlights the major problem of data collection, that of

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finding the specific individual designated from the sampling procedure. One hundred and nine or 34% of the total sample were never personally contacted by the survey team. Most of these were just difficult to find. Probably the families of the 59 obsolete addresses had moved out of the city or had otherwise left no record of their moves. Some of these, no doubt, could have been found but cost limitations on the project prevented further investigation.

The families of missing subjects provided information about the subjects' location. These second-hand responses were recorded and were used to end the search for that particular individual. Most had moved from the Houston area for marital or employment reasons. Many were reported as being in the military service. At the time of the interview, in the spring of 1972, the military draft was active and the Vietnam War was "winding down". Two subjects had died. In total, 50 subjects were reported as having moved out of the Houston area or otherwise not available.

A considerable number of subjects that were contacted did not produce a usable interview. For 27 there was a problem meeting the strict qualifications of the groups and the interview was not pursued. Most of these were subjects who did not pass the NYC screening. Fifteen of these were subjects initially designated as controls who claimed NYC experience or subjects initially designated as NYC participants who disclaimed NYC experience. The former claimed NYC experience with another sponsor and could not be used. The latter might

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TABLE 2 - RESULTS AND DISPOSITION OF THE SURVEY TASK[1]

	In-School Group (1)	Summer Group (2)	Control Group (3)	Total Sample (4)
TOTAL SAMPLED	163	59	96	318
DISPOSITION				
NEVER CONTACTED				
Obsolete Address	31	9	19	59(.18)
Respondent Absent:				
Military				19
Moved				29
Deceased				2
TOTAL ABSENT	27	10	13	50(.16)
CONTACTED				
Refusals	4	6	8	18(.06)
Non-Surveys				
Failed NYC screen				15
Failed race screen				10
Went to active NYC				
TOTAL NON-SURVEYS	7	7	13	27(.08)
SURVEYS NOT USED				
Still in high school				15
Incomplete/Unreliable				6
Respondent too old				1
TOTAL NOT USED	11	7	4	22(.07)
TOTAL RESULTS	80(.49)	39(.66)	57(.59)	176(.55)
TOTAL USABLE SURVEYS	83(.51)	20(.34)	39(.41)	142(.45)

[1]Numbers in parentheses are percents of total sampled in the respective column.

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have been the result of faulty records upon which their inclusion in the NYC program was based or someone else's pretending to be the subject. But the most likely explanation is that they were short term NYC participants who could not remember details, or an individual who mistook his NYC job as being with another organization such as the school, a city park or the city-sponsored youth employment program.

Most of the initial classification of the race variable from the NYC files were made on the basis of interpreting the carbon marks from the NYC-16 forms. In the early years of the program, the sponsor did not retain information on the race or ethnic origin of participants although this information did appear on the original copy of a form sent to Washington. The carbon copy retained by the sponsor had the racial information blacked out, thus the interpreting of carbon marks on the sponsor's copy was the only way left on most records to make the classification and use it as a strata variable. In all of the interviews and contacts made among those initially classified as Black or Mexican-American, there were no discrepancies between the initial classification and the interviewer's observation. With initially classified whites there were three families which were misclassified. The problem was compounded by the fact that 100% of the white subjects in the file were sampled. Thus ten subjects from these three families were screened before being interviewed.

Two subjects who were still in high school were screened out because they had returned to active participation in NYC

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by the time they were interviewed even though they had been in the inactive group when sampled.

Twenty-two individuals were interviewed but their schedule was not included in the final tabulation. Most of these produced a completely usable interview, but were still in high school. It was not clear at first what kind of problem these subjects would present in the analysis. However, it was later decided that the purpose of the investigation was to analyze post-high school responses of the groups therefore they were dropped from the analysis.

Other interviews were not used because of questionable information obtained. For instance, six interviews were rejected because the information obtained did not corroborate with the file information on the subject, and the interviewer strongly suspected the interviewee was a fraud. Perhaps this happened because of a premature pay incentive, on the part of the interviewer, which induced the respondent to misidentify himself.

Cross Tabulation

Ideal control group design demands that the groups being compared be alike in all respects except for the treatment, so that differences in the performance criteria can be attributed to the treatment alone. Such a demand suggests a cross-tabulation arrangement of the sample data, as shown in Table 3. In this table, the variables that should demonstrate a likeness between the control and NYC groups are age, sex,

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race, marital status, education level, head of family and education of the head. Additional data collected but not included in the subsequent analysis is included in Appendix B. Table 3 includes an appropriate test of likeness including the t-Test of difference between means for continuous variables and the chi-squared test of independence for count variables.

It is expected that stratified variables such as age, race and sex would produce similarity between the NYC and control group on these variables. But the judgment was made to abandon proportionality between the sample and the population with regard to whites and to interview as many of the whites in the population as could be found. The result of that judgment, together with a low white response rate, left the sample with the disproportionality indicated by the chi-square of 7.92 for race in Table 3. This disproportion, however, is not as serious in multiple regression analysis as it appears here.

Other variables which were not under sample control did not vary much between groups. Marital status and education level were under no experimental control at the time the sample was selected. They could have caused serious problems of comparability, however, neither indicates serious differences between the NYC and control groups. But there are relatively more married and less single subjects in the NYC group compared with the controls, and there are relatively more high school graduates and fewer dropouts in the NYC group compared with the controls.

TABLE 3 - RAW COMPARISON OF THE EXPERIMENTAL AND CONTROL GROUPS

CHARACTERISTIC	Control	Experimental
1. Independent Variables		
Age		
20 years and lower	10	24
20 to 21 years	10	22
21 to 22 years	7	24
22 to 23 years	6	21
23 years and above	6	12
		$X^2(4)=1.350$
Average Age	21.0037 (1.8675)	21.0957 (1.6396) t=-0.269
Race		
White	9	7
Mexican-American	13	35
Black	17	61
		$X^2(2)=7.917^*$
Sex		
Male	14	36
Female	25	67
		$X^2(1)=0.008$
NYC Status	39	103
Marital Status		
Single	26	56
Married	9	40
Other	4	7
		$X^2(2)=3.214$
Education		
Dropout	12	22
High School Graduate	18	57
Some College	9	24
		$X^2(2)=1.499$
Head of the Family		
Father	20	53
Mother	15	43
Other	4	7
		$X^2(2)=0.510$
Education of Head		
Dropout	18	53
High School Graduate	5	11
Some College	16	39
		$X^2(2)=0.347$

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TABLE 3 - RAW COMPARISON OF THE EXPERIMENTAL AND CONTROL GROUPS (CONT'D)

CHARACTERISTIC	Control	Experimental
B. Dependent Variables		
Total Post HS Earnings	3893.90 (3195.90)	3021.39 (3223.42) t=1.450
Average Monthly Post-HS Earnings	328.62 (189.55)	271.13 (198.16)* t=1.740*
Percent of Time Unemployed	0.0689 (0.1890)	0.0991 (0.1980) t=-0.839
Probability of HS Graduation	0.692	0.736
Probability of College Attendance	0.231	0.233
Probability of additional Post-HS Training	0.410	0.320
C. Special Variables		
Time of High School Exit		
After January 1971	7	20
1-10 Mo. Before Jan 1971	7	21
11-20 Mo. " " "	7	22
21-40 Mo. " " "	6	26
40 Mo. Plus " " "	11	14 $X^2(4)=4.778$
Composition of HS Employment		
NYC Work only	0	48
NYC and Non-NYC work	0	55
Non-NYC work only	28	0
No High School work	11	0
Type and Length of NYC Work		
None	39	0
Summer-Only	0	20
School Year: 12 Mo. or less	0	41
School Year: More than 12 Mo.	0	42

+Significant at .10 level

*Significant at .05 level

**Significant at .01 level

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The performance criteria include selected labor market measures including total post-high school earnings in the current period, average monthly earnings from the current post-high school period and percent of time unemployed in the current post-high school period. Also, educational performance variables are included to represent the probability of high school graduation, college attendance and of attendance on other post-high school training. The latter is referred to as vocational training.

The rationale of the ideal experimental design is that if all the other explanatory variables are alike, then the differences in the performance criteria are attributable to the treatment variable. The results indicated by Table 3 are that total and average earnings are higher for the control group, while unemployment is higher for the NYC group.

It is not adequate to attribute these results to the treatment variable. The differences in the performance criteria can no better be attributed to the treatment variable as they can to the disproportionalities, large or small, demonstrated in the other explanatory variables. For example, if whites have higher incomes than Blacks or Mexican-Americans then part of the income advantage enjoyed by the controls should be explained by this factor. On the other hand, with more high school graduates in the NYC group, the income advantage might be expected to go the opposite direction.

The problem of separating the influences of these various characteristics on the labor market and educational variables

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cannot be accomplished with simple cross-tabulation, however informative it might be about the details of the sample. Thi problem can only be solved by using some form of multivariate statistical analysis.

FRAMEWORK OF ANALYSIS

The research design also incorporates an explicit technique for analyzing the data. The actual data analysis will be presented in the next two chapters. This section outlines and illustrates the search and analysis methods.

The basic approach is to employ multiple regression analysis with a selected group of explanatory variables including participation in NYC to explain the variation of several performance variables. The central purpose is to isolate the impact of the NYC variable after the variation due to other factors is accounted for. The other explanatory variables are basic characteristics which are presumed to involve some causal linkage with the performance variables. The performance is measured with selected variables describing achievements by the participants in earnings, employment, and education.

The analysis describing the estimated relationships using multiple regression techniques is supplemented with a careful study of interactions between the explanatory variables under consideration as they relate to the regression equations. Furthermore, analysis of covariance measures are developed to detect serious structural differences reflected by the data in the equations.

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Three additional and parallel investigations are conducted on the data, in the same manner described above in order to probe further the importance of the contribution of the kind of NYC participation including summer versus school year and the number of months of participation on the performance variables. Another of the investigations attempted to find if there is a difference between NYC employment and non-NYC high school employment as a determining factor in the post-high school performance of the group. A third investigation attempted to isolate a cohort effect, that is, differences associated with the chronological position of the subjects.

Example of Analysis Procedure

The pattern of analysis adopted in the data analysis chapters is illustrated here with a hypothetical example. For this example use the following made-up data which represented a performance variable Y, and two explanatory variables X_1 and X_2.

Y	X_1	X_2
4.0	0	0
2.0	0	1
4.2	0	0
3.1	0	1
3.8	0	0
3.0	0	1
2.2	1	0
5.6	1	1
1.8	1	0
5.4	1	1
2.0	1	0
5.5	1	1

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The analysis consists of three parts. First, the analytical model is specified.

$$Y_i = b_0 + b_1 X_{1i} + b_2 X_{2i} + u_i \qquad (1)$$

Where

Y = a performance variable
X_1 = explanatory factor #1; factor #1 present = 1, Other = 0
X_2 = explanatory factor #2; factor #2 present = 1, Other = 0
u = Error term
i = Observations 1 through 12

The explanatory factor of special interest, of course, is participation in NYC.

The second part of the analysis consists of presenting the results of multiple regression analysis, as shown in Table 4, below.

TABLE 4 - REGRESSION ANALYSIS OF THE HYPOTHETICAL EXAMPLE

CHARACTERISTIC	PERFORMANCE FACTOR (Y)
Factor #1	1.250+ (0.755)
Factor #2	0.250 (0.755)
Constant	2.875**
Observations	12
R^2	0.241
ANOVA F-Ratio	1.43

+Significant at .10 level
*Significant at .05 level
**Significant at .01 level

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Two tests are of importance in regression analysis: the t-test that the individual regression coefficients are significantly different from zero and the analysis of variance (ANOVA) F-Ratio which essentially tests that the regression coefficients taken as a group are all equal to zero.

The third part of the statistical investigation is an analysis of covariance.[1] This analysis consists of dividing the sample on the basis of one of the variables say the presence and absence of factor #2, and estimating two separate sets of coefficients of equation (2).

$$Y_i = g_0 + g_1 X_{1i} + u_i \qquad (2)$$

where

$i = 2,4,6,8,10,12$ then $i = 1,3,5,7,9,11$

Table 5 presents these sub-sample equations where the g_1 terms are 3.500 and -1.000, respectively. For the subset with factor #2 and without factor #2.

In addition, the analysis of covariance procedures used includes a test of difference of individual coefficients and analysis of covariance (ANCOVA) F-Ratios testing the commonality of the two equations. The difference between the individual coefficients 3.500 and -1.000 at their respective standard errors is the t-score in parenthesis 24,643. This t-score is:

$$t = \frac{b_3}{S_{\bar{Y}}}$$

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[2] Procedure used here incorporated several features of analysis of covariance treated in J. Johnston, Econometric Methods, 2nd (McGraw-Hill, 1972), pp. 192-207.

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TABLE 5 - ANALYSIS OF COVARIANCE OF THE HYPOTHETICAL EXAMPLE

	PERFORMANCE FACTOR (Y)	
	FACTOR #2 PRESENT	FACTOR # 2 ABSENT
	3.500** (0.129) [24.648**]	-1.000** (0.129)
Constant	2.000	4.000
Observations	6	6
R^2	0.995	0.938
ANOVA F-Ratio	735.0**	60.0**
ANOCOVA F-Ratios		
Intercepts	0.11	
Slopes	607.5**	
Homogeneity	307.5	

^{t}Significant at .10 level

*Significant at .05 level

**Significant at .01 level

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From the following equation:

$$Y_i = b_0 + b_1 X_{11} + b_2 X_{21} + b_3 X_{11} X_{21} + u_i \qquad (3)$$

where

i = 1 through 12

S_3 = the standard error of b_3

$X_{11} X_{21}$ = the product of the two variables for each observation or interaction term.

The ANOCOVA F-Ratios, estimated according to Johnston, provide a test of the similarity of two equations described by (2) for the X_2 subjects.[2] The significance of these F-Ratio signals the rejection of the hypothesis of similarity of intercepts, slopes and total relation, thereby, a structural difference between the two groups. In this example, the t-test and the slope F-Ratio essentially test the same thing but with more variables in the equation. The slope F-Ratio incorporates all non-intercept coefficients.

The procedure described is used to analyze the variables described in Table 3. Several different estimates with other variables were tried but not included here. The set chosen combines some of the more significant relations found among the variables which also displayed a strong a priori basis for inclusion.

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[3] Ibid, p. 178-79.

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CHAPTER 3

ANALYSIS OF LABOR MARKET PERFORMANCE

The main problem of this study is to determine the effect of NYC participation on post-high school earning capacity. Earnings and employment are the most direct measure of earning capacity. This chapter investigates the influence of the NYC Program upon earnings and unemployment reported currently by former NYC participants and non-participants. Multiple regression techniques are used to isolate the NYC role from other determinants of labor market performance.

The investigation includes four parts: 1) a preview of expected results according to economic reasoning and previous investigation, 2) the results of the multivariate analysis of the total sample, 3) the interaction of NYC status, sex and race upon the regression estimates, and 4) some additional investigations relating to the nature of the NYC influence.

The basic regression model used in this investigation of labor market performance is described below by equation (1):

$$Y_{ji}=b_o b_1 X_{1i}+b_2 X_{2i}+b_3 X_{3i}+b_4 X_{4i}+b_5 X_{5i}+b_6 X_{6i}+b_7 X_{7i}+b_8 X_{8i}+u_i \quad (1)$$

where

X_1 = Age, a continuous variable measuring age in years as of December 31, 1971

X_2 = Race, 1 = Black; 0 = Other

X_3 = Race, 1 = Mexican American; 0 = Other

X_4 = Sex, 1 = Male; 0 = Female

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X_5 = NYC Status, 1 = Participant; 0 = Control

X_6 = Marital Status, 1 = Single, 0 = Other

X_7 = Marital Status, 1 = Other (Separated, Divorced, Widowed); 0 = Other

X_8 = Education Level, a scale variable from 1 to 11 indicating the highest level of education attained at the time of the interview; 1 = 6th grade or lower, 2 = 7th and 8th grade, 3 = 9th grade, 4 = 10th grade, 5 = 11th grade, 6 = HS Graduate, 7 = College 0-24 credits, 8 = College 25-49 credits, 9 = College 50-74 credits, 10 = College 75 credits plus, 11 = College Graduate

Y_j = Labor Market Performance Criteria, a set of 3 variables representing different aspects of labor market activity

Y_1 = Total Post-High School Earnings, a measure of gross earnings in dollars reported for the current post-high school period. The current period includes the months starting January 1971 until the time of the interview.

Y_2 = Average Monthly Post-High School Earnings, a measure in dollars of total current post-high school earnings divided by the number of months worked.

Y_3 = Percent of Time Unemployed; the ratio of number of months reported as unemployed in the current post-high school period to the total number of months in that period.

u_1 = An error item.

$b_0, b_1, \ldots, b_8$ = Parameters to be estimated

i = Observations; 1, 2..., N

EXPECTED RESULTS

Before presenting the parameter estimates generated by the analysis of the sample data, the anticipated results are described in this section. That is, the expected direction and strength of the relations of age, race, sex, NYC status, marital status and education on post-high school earnings and

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and unemployment are appraised from the point of view of reason and evidence.

Age

The age of the subject is expected to have a positive effect on earnings. The post-high school years, ages 18 to 25, are generally years of increasing labor force participation.[1] This relation persists in national estimates across sex and race characteristics. It is presumed that with rising participation rates that earnings would also rise. Furthermore, it is commonly understood that paychecks often increase with time on the job. This increase reflects the benefits of seniority, the improvement of job skills with time, and the reliability of older workers.

In their nationwide NYC study, however, Somers and Stromsdorfer did not find age to be a significant factor determining post-high school earnings.[2] The fact that their sample covered a narrow age span (average 20 years, standard deviation 1.08 years) may have affected the significance of this variable. The present study has a slightly wider age perspective (average 21 years, standard deviation 1.75 years) because age was a stratified variable and because of the passage of time.

In the female subsample, Somers and Stromsdorfer found age to be positively related and statistically significant in

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[1] U.S. Department of Labor, Manpower Report of the President, March 1973 (Washington, D.C.: Government Printing Office, 1973), p. 221, Table E-4.

[2] Gerald G. Somers and Ernst W. Stromsdorfer, A Cost-Effectiveness Study of the In-School and Summer Neighborhood Youth Corps (Madison, Wisconsin: Industrial Relations Research Institute, 1970), p. 152, Table 25.

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in determining post-high school earnings. But it was not significant in the male subsample.[3]

National averages indicate that unemployment rates drop steadily between the ages of 18 and 24 for both males and females.[4] When young adults enter the labor force they may not quickly find what they want, they are not readily acceptable by employers and might change jobs more frequently. These factors are conducive to higher unemployment rates at younger ages which diminish with time.

The strength of the age - unemployment relation is questionable. With relatively favorable employment opportunities, as experienced in Houston, this relation may be dampened. Somers and Stromsdorfer did not find age to be a significant factor in determining post-high school unemployment in a nationwide sample.[5]

Race

The earning levels of whites are expected to be above those of the minority groups in Houston, with Mexican-American income level slightly above blacks. These are the rankings found by the Briggs Study of the Houston Labor Market.[6] These earning differentials are also expected because of

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[3] Somers and Stromsdorfer, Cost-Effectiveness Study, pp. 159-172, Tables 26-29.

[4] Manpower Report, p. 148, Table A-16.

[5] Somers and Stromsdorfer, Cost-Effectiveness Study, p. 152-3, Table 25, as well as all major subsamples.

[6] Vernon M. Briggs, Jr. Negro Employment in the South, Volume 1, The Houston Labor Market, U.S. Department of Labor, Manpower Research Monograph No. 23 (Washington, D.C., U.S. Government Printing Office), p. 10, Table 2.

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hiring and wage discrimination against blacks and Mexican Americans and because of inferior quality of education afford to minority children especially in early years.

In their nationwide NYC survey, Somers and Stromsdorfer did not find a significant association between blacks, Mexican Americans and whites on post-high school earnings.[7] But Houston, like other southern cities with a legacy of slavery and racial intolerance toward blacks and Mexican-Americans, is expected to have a more pronounced earning differential between whites and minority groups compared with national averages.

Briggs indicates generally lower unemployment rates for whites in Houston compared with minorities, especially among young workers aged 16 to 19 years.[8] But an exception is in men over 20 years where both black and white unemployment rates are about equal but Mexican-American rates are extremely low. If the 1968-69 Briggs' figures are not unusual, unemployment rates for Mexican males may be lower than whites. Consequently, because of diverse trends race alone may not be a strong determinant of unemployment.

In the nationwide NYC study, Somers and Stromsdorfer did not find blacks or Mexican-Americans to be significantly lower

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[7] Somers and Stromsdorfer, A Cost-Effectiveness Study, p. 152, Table 25, as well as the sex subsamples, pp. 159-164, Tables 26 and 27.

[8] Briggs, Houston Labor Market, p. 13, Table 4.

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than whites in unemployment for their total sample.[9] But black males did have significantly more unemployment than white males in their study.[10] The Mexican-American subsample was too small in the national sample for valid inference.

Sex

Males are expected to have higher earnings than females for a number of reasons. First males in the age group under study have higher labor force participation rates. Males also have an earning advantage because better work opportunities are afforded to male workers and because of sex discrimination against female workers.

Somers and Stromsdorfer found sex to be an extremely significant factor in accounting for income variation among post-high school youth.[12] With an average of 18 months in the labor force, males earned $1,635 more than females. They also reported that the male-female income differential was stronger for whites than for blacks.[13]

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[9] Somers and Stromsdorfer, A Cost Effectiveness Study, p. 152, Table 25.

[10] Ibid, pp. 159-64, Tables 26 and 27.

[11] Manpower Report, p. 221, Table E-4.

[12] Somers and Stromsdorfer, A Cost-Effectiveness Study, pp. 152-3, Table 25.

[13] Ibid, pp. 169-72, Table 28 and 29.

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Somers and Stromsdorfer did not find sex a significant factor determining post-high school unemployment.[14] However Houston averages indicate much larger unemployment rates for women compared with men among the blacks and Mexican-American but no so for whites.[15]

NYC Status

The major question of this study concerns the result of the NYC coefficient in the regression equations for earnings and unemployment.. A positive effect is expected because the participants have possibly received more work experience, more and better education, better counseling and achievement motivation than the controls.

Somers and Stromsdorfer in a nationwide study found participation in NYC to be significant in raising earnings $831 in a post-high school period averaging 18 months.[16] Furthermore, NYC participation improved earnings for both blacks and whites, but moreso for blacks.[17]

They also showed NYC participation significantly reduced post-high school unemployment for the black subsample but not for the total sample.[18]

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[14] Ibid, pp. 169-72, Table 28 and 29.

[15] Briggs, Houston Labor Market, p. 13, Table 14.

[16] Somers and Stromsdorfer, A Cost-Effectiveness Study, pp. 152-3, Table 25.

[17] Ibid, p. 183.

[18] Ibid, pp. 152-71, Tables 25-29.

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Marital Status

The effect of marriage on earnings depends a great deal on the sex of the individual. It would generally be expected that married males would earn more than single males; but that married females would earn less than single females. A married female may leave her job to remain at home, and while there is greater economic compulsion for brides in low income families to remain on the job, the general trend of post-marriage exodus of females from the job market is expected. Furthermore, a female who suffers divorce, separation or widowhood is more likely to return to a job because of the necessity of providing for herself and her children.

In a combined sample of males and females, the increase in earnings of married over single males may be partially offset by the earning decrease from married females; thus the married-single earning differential would not be expected to be very large depending upon the proportion of males and females in the sample. But earnings of subjects in other marital states may be expected to increase over married because of the working females.

Somers and Stromsdorfer did not find marital status to be a significant factor in post-high school earnings. However, in the male subsample as expected the married significantly out-earned the single; and in the female subsample, the single significantly out-earned the married.[19]

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[19] Ibid, pp. 152-64, Tables 25-27.

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Unemployment in marital states is somewhat more difficult to appraise. National averages indicate that married individuals, both male and female have lower unemployment rates than single or "other" marital status.[20] Married men tend to have a job, and married women are not looking for one.

Somers and Stromsdorfer found marital status to be important in determining unemployment only among females.[21] There the differential between married and single and married and other was the greatest.

Education

Higher levels of education is commonly understood to lead to greater income and lower unemployment.. However, in the age group studied impact of the level of education may not have attained its ultimate contribution to post-high school earnings because the ones that are advancing to college may be sacrificing current income and may not have outearned high school graduates who have remained on the job. But college dropouts would be expected to earn more than high school graduates or high school dropouts.

LABOR MARKET PERFORMANCE OF THE TOTAL SAMPLE

The coefficients of the basic regression model for the total sample which are presented in Table 6 describe the contribution of race, sex, education, marital status, age

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[20] Manpower Report, p. 152, Table A-19.

[21] Somers and Stromsdorfer, A Cost-Effectiveness Study, pp. 162-3, Table 27.

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TABLE 6 - ANALYSIS OF LABOR MARKET PERFORMANCE FOR THE TOTAL SAMPLE

Characteristic	Total Post-High School Earnings	Average Post-High School Earnings	Percent of Time Unemployed
Age:	260.68*	4.81	-.00018
	(149.45)	(9.18)	(.01016)
Race: Black-White	-2954.95**	-168.36**	.01073
	(793.10)	(48.73)	(.05391)
Mexican-White	-2011.40**	-108.08*	-.05443
	(851.59)	(52.33)	(.05788)
Sex: Male-Female	2363.82**	176.07**	.02579
	(489.70)	(30.09)	(.03329)
NYC Status: NYC-Control	-393.90	-30.66	.04014
	(544.11)	(33.43)	(.03698)
Marital Status Single-Married	-438.82	-15.16	.08231*
	595.26	(36.58)	(.04046)
Other-Married	2180.95*	82.54+	-.05972
	(976.94)	(60.03)	(.06640)
Education Level:	93.30	13.87*	-.01912*
	(146.55)	(9.00)	(.00996)
Constant	-955.10	193.29	.14254
No. of Observations	142	142	142
R^2	.30295	.29220	.12078
S.E.E.	2775.19	170.53	.18863
Anova F-Ratio	7.26**	6.86**	2.28*

+Significant at .10 level

*Significant at .05 level

**Significant at .01 level

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and NYC participation on the labor market performance criteria. The importance of these contributions depend upon the statistical significance of the regression coefficients and the reasonableness of the observed relationship. If the regression coefficient estimate does not have at least a 90% chance of being different from zero upon resampling, then the estimate is not considered to be statistically significant. If the contribution of many of the non-NYC variables are inconsistent with expectations, then confidence in the observed contribution of NYC participation on labor market performance is eroded. The results of the regression analyses which are discussed below, are aimed at the appraisal of that contribution by NYC participation with other factors held constant. First, the other factors are considered then NYC.

Race

The coefficients for race in Table 6 are interpreted as differentials between whites and each of the minority races. Thus, Mexican-Americans earned $2,011.40 less than whites, and blacks earned $2,954.95 less than whites in total post-high school income, after allowing for the variation due to other factors. Average monthly earnings were $108.08 lower for Mexican-Americans compared to whites, and $168.36 lower for blacks compared to whites. These results agree with the expectations concerning the Houston labor market. Race is not a factor determining unemployment in this sample.

Sex

The sex coefficient of Table 6 is also interpreted as a differential; in this case, the difference between males and

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females. Thus, males earned $2363.82 in the total period, and $176.07 monthly more than females. These data indicate a rather substantial and significant income advantage for the male subjects and is consistent with expectations.

Education

The results indicate that the education level is positively related to total earnings, and that average monthly post-high school earnings rose $13.87 for each of the eleven education levels. The monthly income, then, of a college graduate within the age group of the study would be expected to earn $152.57 more than an eighth grade dropout, or $55.48 above a high school graduate. Sacrificing current income to attend college did not offset the expected income gain due to education in this sample. Furthermore, the unemployment rate dropped almost 2% with each education level.

Marital Status

Married subjects did not out-perform single subjects in earnings according to the regression results, while the separated, divorced and widowed did better than the married. Those in the other marital status earned $2180.95 more than the married subjects in total earnings, with average monthly earnings also higher. These results give an income advantage to those subjects victimized by marital break up which is somewhat greater than expected. But the part of the sample in this group is small and may be subject to sampling variation.

Single subjects suffered 8% more unemployment compared with the married. This also is consistent with expectations.

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Age

Based on the cross-section estimates of the regression equation, the evidence indicates that subjects in the sample gained $260.68 per year (of age) in total earnings during the current time period. Since there was no increase in average monthly earnings associated with age, the $260.68 is over-biased since it is reflecting the shorter post-high school period of younger subjects who exited high school after January 1971.

NYC Participation

The results of the regression analysis indicate that, after accounting for variation in the performance criteria due to other characteristics, participation in NYC did not materially influence post-high school earnings or unemployment. Thus NYC participation did not behave as expected in the total sample. The investigation will now turn to look at NYC performance in selected subsamples of the data.

NYC PARTICIPATION WITHIN SELECTED SUBSAMPLES

This section analyzes the sample data by estimating equations similar to(1) above on subsets of the total sample partitioned by NYC status, sex and race. The equations compared and tested according to the analysis of covariance procedure described in Chapter 2. Basically this procedure consists of three parts: 1) the regression analyses of the subsamples with t-tests of significance of the regression coefficients and the analysis of variance (ANOVA) F-Ratio

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test for the whole equation; 2) the analyses of covariance (ANOCOVA) F-ratios testing the commonality of the subsample equations; and 3) the interaction analysis from which t-tests for differences between individual coefficients from the subsample equations are made.[22]

NYC Status

Ideal experimental design in the present study would require that the NYC group and the control group be alike in all

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[22] The necessary equations are cumbersome and are not included here in their entirety. As an example, consider the computation of t-scores testing the difference between coefficients from the NYC group and the control group. Let the set of regression coefficients estimated for the NYC participants alone using equation (1) with X_5 left out be:

$B = (b_1, b_2, b_3, b_4, 0, b_6, b_7, b_8)$ with the corresponding standard efforts set

$$S = (s_1, s_2, s_3, s_4, 0, s_6, s_7, s_8).$$

Similarly, let the sets of regression coefficients and their standard errors for the control subsample be B' and S', respectively. Then the desired test of significance between individual coefficients from the two equations

$$t_j = \frac{b_j - b'_j}{f(s_j, s'_j)}; \quad j = 1, 8$$

is estimated from the coefficients of the interaction terms of equation (2) on the entire sample (using the same variable definition as equation (1)).

$$Y = h_0 + h_1X_1 + h_2X_2 + h_3X_3 + h_4X_4 + h_5X_5 + h_6X_6 + h_7X_7 + h_8X_8 + k_1X_5X_1 +$$
$$k_2X_5X_2 + k_3X_5X_3 + k_4X_5X_4 + 0 + k_6X_5X_6 + k_7X_5X_7 + k_8X_5X_8 + u. \quad (2)$$

then form the set $K = (k_1, k_2, k_3, k_4, 0, k_6, k_7, k_8)$ with standard errors of

$$E = (e_1, e_2, e_3, e_4, 0, e_6, e_7, e_8).$$

thus, the estimates of the desired ts are: $t_j = k_j/e_j$; $j=1,8$ this is not a proof but an explanation of an application from J. Johnson Econometric Analysis, 2nd (McGraw Hill, 1972), p. 206. Similar estimates are made by partitioning the sample according to sex and race.

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fundamental respects so that differences in post-high school earnings and unemployment be attributed to NYC. When the analysis of covariance is based on NYC status it provides a structure for testing the similarity of NYC participants and the controls. This part of the analysis, therefore, is necessary to indicate imperfections in the research design.

The commonality of the equations formed by the two groups separately relating performance with the non-NYC explanatory variables is tested with the ANOCOVA F-Ratios. These are shown in Table 7 for total and average post-high school earnings. None of these ratios are statistically significant. If they were, the hypothesis of commonality could be rejected. For example, the overall test of homogeneity for average post-high school earnings between the NYC equation and the control equation is 0.79., this is not greater than 1.94 (the critical F-value at .95 confidence for 8/126 degrees of freedom). Thus the coefficients of the two equations, taken as a group, are not different.

There is one individual coefficient in the set of equations dealing with total post-high school earnings which is different between participants and controls, even though the entire set of coefficients are essentially the same. This is the age coefficient, with a t-score of difference between regression coefficients of -1.662 (see number in brackets). The control group responded much more definitely to age than did participants, that is current earnings improved $700.51 for each year of age for controls, and this was greater than for

TABLE 7 - ANALYSIS OF NYC AND CONTROL SUBSAMPLES FOR LABOR MARKET PERFORMANCE

Characteristic	TOTAL EARNINGS NYC	TOTAL EARNINGS CONTROL	AVERAGE EARNINGS NYC	AVERAGE EARNINGS CONTROL	UNEMPLOYMENT NYC	UNEMPLOYMENT CONTROL
Age:	93.45	700.61**	-0.69	23.11*	0.0045	-0.0047
	(180.57)	(283.91)	(11.75)	(16.54)	(0.0125)	(0.0219)
		[-1.662*]		[-1.293]		[0.369]
Race: Black-White	-3402.91**	-3331.97**	-167.25*	-231.23**	0.0691	-0.0262
	(1198.91)	(1113.13)	(73.27)	(64.96)	(0.0781)	(0.0853)
		[-0.041]		[0.621]		[0.829]
Mexican-White	-2313.31*	-1768.03*	-109.84*	-100.22*	-0.0026	-0.0699
	(1264.29)	(1196.70)	(77.30)	(69.67)	(0.0823)	(0.0916)
		[-0.303]		[-0.098]		[0.541]
Sex: Male - Female	2253.07**	2544.79**	174.10**	176.75**	0.0613*	-0.0503
	(607.15)	(879.34)	(37.42)	(51.24)	(0.0399)	(0.0674)
		[-0.256]		[-0.038]		[1.656*]
Marital Status: Single - Married	-382.86	-199.98	3.99	-54.46	0.0849*	0.0656
	727.40	(1177.58)	(44.83)	(68.61)	(0.0478)	(0.0902)
		[-0.124]		[0.646]		[0.190]
Other - Married	2302.61	1666.74	125.56*	-24.07	-0.0541	-0.0670
	(1225.39)	(1741.38)	(75.60)	(101.49)	(0.0804)	(0.1345)
		[0.280]		[1.082]		[0.094]
Education	99.48	158.44	9.59	22.13*	-0.0156*	-0.0175
	(191.14)	(246.57)	(11.79)	(14.37)	(0.0126)	(0.0180)
		[-0.178]		[-0.532]		[-0.047]

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TABLE 7 - ANALYSIS OF NYC AND CONTROL SUBSAMPLES
FOR LABOR MARKET PERFORMANCE

	TOTAL EARNINGS		AVERAGE EARNINGS		UNEMPLOYMENT	
	NYC	CONTROL	NYC	CONTROL	NYC	CONTROL
Constant	2507.95	-10667.35	292.06	-283.31	0.0141	0.2895
No. of Observations	103	39	103	39	103	39
R^2	0.248	0.486	0.244	0.504	0.141	0.137
Anova F-Ratio	4.47*	4.19*	4.38*	4.50*	2.23	0.70
Anocova F-Ratios:						
Intercepts		0.52		0.84		1.18
Slopes		0.50		0.79		0.49
Homogeneity		0.50		0.79		0.57

+Significant at .10 level

*Significant at .05 level

**Significant at .01 level

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participants whose response was not significantly different from zero. The same factor appears in average earnings but not so pronounced.

Sex

The sample data are probed further by dividing the observations by sex. With such a division an analysis of covariance is helpful in determining if there is a difference in response to participation in the NYC program for males and females taken separately. Table 9 shows the estimates of such an analysis.

The results indicate that neither males nor females taken separately gain income because of participation in NYC. And male NYC participants may even experience more unemployment compared with male controls. Although this equation shows an extremely weak overall relation.

There is an expected difference between males and females associated with the post-high school earnings response between marital states. Single males earn $2382.01 less than married males, while there is no observable difference between earnings of married and single females. The non-significance of this variable suggests non-participation in the labor force and unemployment by single females together with brides remaining in the labor force after marriage.

The age coefficients for males and females, whose difference yields a t-score of -2.196, presents a mysterious comparison of age the relation between age and average monthly post-high school earnings. The increase in female average monthly earnings of $17.53 for each year of age is closer to expectations than the decrease in earnings associated with age for males.

TABLE 8 - ANALYSIS OF MALE AND FEMALE SUBSAMPLES
FOR LABOR MARKET PERFORMANCE

Characteristic	TOTAL EARNINGS		AVERAGE EARNINGS		UNEMPLOYMENT	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Age:	-199.34 (389.83)	468.08** (151.62) [-1.783*]	-32.77+ (22.80)	17.53* (9.90) [-2.196*]	0.0018 (0.0277)	-0.0008 (0.0104) [0.103]
Race: Black-White	-3647.92* (1659.84)	-2834.93** (866.57) [-0.478]	-242.14** (97.10)	-142.11** (56.60) [-0.947]	0.0681 (0.1178)	0.0012 (0.0593) [0.565]
Mexican-White	-3088.50* (1813.08)	-1483.86+ (921.44) [-0.872]	-194.36* (106.06)	-61.92 (60.19) [1.158]	0.0114 0.1287)	-0.0602 (0.0630) [0.559]
NYC Status:	-679.73 1096.68	-181.42 (618.04) [-0.435]	-44.10 (63.57)	-28.00 (40.37) [-0.226]	0.1227+ (0.0771)	-0.0022 (0.0423) [1.563+]
Marital Status: Single - Married	-2382.01* (1145.95)	691.28 (695.80) [-2.479*]	-103.89+ (67.04)	32.78 (45.45 [-1.773*]	0.1262+ (0.0813)	0.0640+ (0.0476) [0.720]
Other - Married	2159.26 (2302.78)	2047.40 (1010.31) [0.050]	26.38 (134.71)	83.70 (65.99) [-0.412]	0.0034 (0.1635)	-0.0805 (0.0691) [0.537]
Education:	-06.91 (281.35)	139.02 (171.51) [-0.807]	13.78 (16.46)	12.29 (11.20) [0.079]	-0.0119 (0.0200)	-0.0211** (0.0117) [0.435]

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TABLE 8 - ANALYSIS OF MALE AND FEMALE SUBSAMPLE FOR LABOR MARKET PERFORMANCE (CONT'D)

Characteristic	TOTAL EARNINGS		AVERAGE EARNINGS		UNEMPLOYMENT	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Constant	14327.30	-6443.50	1203.56	-125.20	-0.0594	0.2182
No. of Observations	50	92	50	92	50	92
R^2	0.265	0.230	0.213	0.171	0.163	0.121
Anova F-Ratio	2.16+	4.67**	1.62	2.48*	1.16	1.65+
Anocova F-Ratios						
Intercepts		23.30**		34.24**		0.60
Slopes		1.45		1.00		0.62
Homogeneity		4.25**		5.15**		0.53

+Significant at .01 level

*Significant at .05 level

**Significant at .01 level

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Race

It is important to see what effects of NYC participation are on blacks, Mexican-Americans and whites taken separately in the sample. This is done in an analysis of covariance conducted by partitioning the sample three ways according to race. The estimates of this analyses are presented in Table 9.

The results indicate that Mexican-American NYC participants earned less in average monthly earnings than controls of the same ethnic group. The same results appear in the white subsample, but it apparently is too small and variable for valid inference. Otherwise, NYC participation neither raised total post-high school earnings, nor reduced unemployment for the races taken individually.

There is an indication that earning improvement does not accrue to education as much to blacks and Mexican-Americans as it does for whites. The small white sample may have resulted in an over-inflated education coefficient. With the result that the education coefficient shows the greatest difference between the races. For example, a t-score of -2.293 between white and black response to education. But this may not be all to the long-run detriment of blacks since it may point to more income sacrifice for college education. This will be reflected in the next chapter on education gains.

ADDITIONAL INVESTIGATIONS

Three additional estimates were made on variations of the basic structural equation. Two of these variations involve

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TABLE 9 - ANALYSIS OF WHITE, MEXICAN AND BLACK SUBSAMPLES FOR LABOR MARKET PERFORMANCE

Characteristic	Total Earnings			Average Earnings		
	White	Mexican	Black	White	Mexican	Black
Age:	970.58+ (617.48)	207.59 (352.88) [-1.314+]	189.23 (176.71) [-1.477+]	47.22+ (30.54)	8.08 (17.45) [-1.096]	2.29 (13.00) [-1.380+]
Sex: Male-Female	4694.47* (2299.72)	2407.00** (993.27) [-1.131]	2194.79** (592.06) [-1.287+]	330.75** (113.74)	165.86** (49.11) [-1.325+]	167.29** (43.57) [-1.368+]
NYC:	-2104.38 (2170.24)	-758.62 (1176.63) [0.669]	-544.62 (693.01) [0.824]	-151.48+ (107.33)	-89.65+ (58.17) [0.500]	-11.04 (51.00) [1.207]
MStat:Single-Married	625.73 (3453.06)	-1070.90 (1115.57) [-0.583]	-445.70 (728.84) [-0.375]	94.66 (170.78)	-48.36 (55.15) [-0.800]	-32.77 (53.63) [-0.725]
Other-Married	3090.71 (3124.75)	3132.19+ (2365.48) [0.013]	1405.67 (1190.41) [-0.597]	109.21 (154.54)	201.38* (116.94) [0.462]	27.32 (87.60) [-0.472]
Education:	1083.84* (573.89)	-10.16 (381.25) [-1.931*]	-39.28 (159.98) [-2.293*]	61.72* (28.38)	13.43 (18.85) [-1.386+]	5.36 (11.77) [-1.871*]
Constant	-22750.52	-828.15	-1329.73	-1062.62	72.05	136.10
No. of Observations	16	48	78	16	48	78
R^2	0.547	0.195	0.232	0.616	0.298	0.195
Anova F-Ratio	1.81	1.65	3.57**	2.41	2.90*	2.86*
Anocova F-Ratios						
Intercepts	7.23**			6.38**		
Slopes	0.81			0.79		
Homogeneity	1.71*			1.57+		

TABLE 9 - ANALYSIS OF WHITE, MEXICAN AND BLACK SUBSAMPLES FOR LABOR MARKET PERFORMANCE (CONT'D)

Characteristic	Unemployment		
	White	Mexican	Black
Age:	0.0042	0.0258*	-0.0084
	(0.0529)	(0.0139)	(0.0150)
		[0.538]	[-0.343]
Sex: Male-Female	-0.0597	0.0090	0.0451
	(0.1970)	(0.0343)	(0.0503)
		[0.491]	[0.780]
NYC:	-0.0078	0.0194	0.0543
	(0.1859)	(0.0462)	(0.0589)
		[0.196]	[0.474]
MStat: Single-Married	0.1992	0.1168**	0.0527
	(0.2958)	(0.0438)	(0.0619)
		[-0.409]	[-0.741]
Other-Married	0.0157	-0.0208	-0.1129
	(0.2677)	(0.0929)	(0.1011)
		[-0.163]	[-0.658]
Education:	-0.0182	-0.0078	-0.0266*
	(0.0492)	(0.0150)	(0.0136)
		[0.266]	[-0.248]
Constant	0.0026	-0.5183	0.3786
No. of Observations	16	48	78
R^2	0.107	0.180	0.121
Anova F-Ratio	0.18	1.50	1.62
Anocova F-Ratios			
Intercepts	1.47		
Slopes	0.43		
Homogeneity	0.57		

+ Significant at .10 level
* Significant at .05 level
** Significant at .01 level

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substitutes for and expansion of the basic NYC variable. The purpose of the substitutions and expansions is to isolate the impact of the kind and intensity of NYC experience and the influence of other high school employment on post-high school earnings and unemployment. The third variation cohort analysis substitutes a variable representing the duration of time between the exit of high school and the current period for each subject for age. In each variation, concentration is on the NYC coefficient or its non-NYC work substitute and on the analyses of covariance of several new variables.

The Kind and Intensity of NYC Experience

The in-school NYC program consists of two parts; the school-year segment which provides part-time employment to youths during the nine months of the academic year; and the summer-only segment which provides for full-time employment to youths during the time they are on summer vacation. In this study all but a few of what are referred to as the school year participants also had some summer employment. Of the 103 NYC participants in the study, 83 are school year participants and 20 are summer only participants.

This investigation probes two features of the program segments: the effects of participation in the summer-only and the school-year segments of the NYC program and the effect of the duration of participation in the school-year program. The effects of the duration are estimated by dividing the 83 school-year participants into two groups; 41 with twelve months or less of NYC experience and 42 with more than twelve months experience.

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The expected results are that school year participants should out-perform summer-only participants and that the school year participants with more experience out-perform the ones with less experience. The school year program usually provides more opportunity for the development of skills, supervision and counseling. And also school year jobs, especially if held over a longer period of time implies steadier work habits and greater opportunities for development of skills and attitudes.

Somers and Stromsdorfer found that school year NYC participants had significantly higher post-high school earnings than did controls while the summer-only group showed no significant gains.[23] Most of the improvements in earnings for the school year group were in the black subsample. Neither school year participation nor summer participation yielded significant improvement in reducing unemployment compared with controls.[24] However, among the male and black subsamples there were significant reductions in post-high school unemployment for the school year group.

These investigations also estimated length of stay in NYC as a quadratic determining both post-high school earnings and unemployment.[25] While this variable was not significant in all of its parts, the estimates indicated an optimum length of stay of 12.9 months to improve earnings and continual reduction in unemployment as length of stay increases.

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[23] Somers and Stromsdorfer, A Cost-Effectiveness Study, p. 106, Table 37.

[24] Ibid, p. 104, Table 36.

[25] Ibid, p. 201, Table 38.

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To estimate the effect of the kind and intensity of NYC experience on post-high school earnings and unemployment in the present study X_5 the NYC variable in equation (1) was replaced by the following three variables:

X_5 = Summer NYC participation; summer-only = 1, Other = 0

X_5' = School year participation for 12 months or less; 12 months or less = 1, Other = 0

X_5'' = School year participation more than 12 months; more than 12 months = 1, Other = 0

The result of the estimates of the revised NYC coefficients each of which are compared against the control group, given in Table 10, do not confirm greater benefits from school year participation compared with summer employment. In fact, the group with the most experience presented the worst record in terms of earnings and unemployment. Participants with more than 12 months experience during the school year earned $71.39 less per month and had 7% more unemployment in the current post-high school period than did controls.

High School Work Composition

The majority of the NYC participants and controls reported some non-NYC work experience. An additional investigation is made to determine if private sector work experience is superior to NYC work experience in improving post-high school earnings and employment records or, indeed, if high school employment of any kind produces beneficial post-high school work performance. Private sector high school work experience yields greater gains in the post-high school period than NYC work because

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TABLE 10- ANALYSIS OF KIND AND LEVEL OF NYC EXPERIENCE

Characteristic	Total Post-High School Earnings	Average Post-High School Earnings	Percent of Time Unemployed
Age:	248.30*	3.71	0.0010
	(149.87)	(9.15)	(0.0102)
Sex: Male-Female	2344.27**	174.71**	0.0260
	(490.44)	(29.95)	(0.0332)
Race: Black-White	-2912.46**	-164.13**	0.0046
	(795.54)	(48.58)	(0.0539)
Mexican-White	-1986.10**	-105.83*	-0.0569
	(852.17)	(52.04)	(0.0577)
NYC: Summer-Control	-83.36	-12.09	0.0517
	(781.42)	(47.72)	(0.0529)
Up to IYR-Control	-110.56	-3.62	0.0044
	(633.26)	(38.67)	(0.0429)
IYR Plus-Control	-882.65+	-71.39*	0.0747*
	(649.58)	(39.67)	(0.0440)
MStat:Single-Married	-566.61	-25.47	0.0898*
	(603.02)	(36.82)	(0.0408)
Other-Married	2143.88*	79.42+	-0.0669
	(977.67)	(59.70)	(0.0662)
Education:	112.63	15.46*	-0.0204*
	(147.27)	(8.99)	(0.0100)
Constant	-740.61	212.13	0.1230
No. of Observations	142	142	142
R^2	0.313	0.311	0.140
Anova F-Ratio	5.97**	5.91**	2.13*
Anocova F-Ratios			
Intercepts	0.81	1.47	1.36
Slopes	0.64	1.14	1.03
Homogeneity	0.66	1.19	1.08

** Significant at .01 level
* Significant at .05 level
+ Significant at .10 level

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the type of work is more directly related to post-high school jobs. And job supervisors in the private sector tend to be more cost conscious and less likely to tolerate poor job habits than NYC supervisors who are more apt to emphasize the learning aspects of the job and the needs of the student. Furthermore, it is most likely that youths with some high school job training perform better than those without, regardless of whether they received the training with NYC or not.

To conduct this investigation the total sample was regrouped as follows:

Group	Description	Number
A	NYC work only	48
B	NYC And non-NYC work	55
C	Non-NYC work only	29
D	No High School Work	11

These different high school employment categories were used to estimate the influence of high school work composition on post high school performance. Equation (1) was used with X_5 the NYC status redefined into three new variables (group D above were used as controls).

Z_1 = NYC Group, NYC only = 1, Other = 0

Z_2 = Combination, NYC and non-NYC work = 1, Other = 0

Z_3 = Non-NYC Group, Non-NYC work only = 1, Other = 0

The results of the estimates regarding the type of high school work experience is presented in Table 11. There was no significant improvement in post-high school earnings associated with any category of work experience. There was somewhat more unemployment for the two groups claiming some NYC experience, regardless of whether they had private sector experience as

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TABLE 11- ANALYSIS OF TYPE OF HIGH SCHOOL WORK EXPERIENCE

Characteristic	Total Post-High School Earnings	Average Post-High School Earnings	Percent of Time Unemployed
AGE:	255.78*	5.48	-0.0005
	(150.72)	(9.22)	(0.0102)
Sex: Male-Female	2476.88**	162.06**	0.0296
	(537.61)	(32.89)	(0.0364)
Race: Black-White	-2072.98**	-169.81**	0.0196
	(807.98)	(49.43)	(0.0547)
Mexican-White	-2096.23**	-99.77*	-0.0516
	(875.69)	(53.57)	(0.0593)
NYC: NYC Only-No Work	-268.93	-69.13	0.1032+
	(940.96)	(57.56)	(0.0637)
NYC and Non-NYC -No Work	-594.37	-25.80	0.0846+
	(939.44)	(57.47)	(0.0636)
Non-NYC Only-No Work	-78.19	-21.25	0.0767
	(1013.35)	(62.02)	(0.0686)
MStat: Single-Married	-427.17	-14.92	0.0784*
	(602.09)	(36.83)	(0.0407)
Other-Married	2194.52*	81.77+	-0.0716
	(984.14)	(60.20)	(0.0666)
Education:	90.20	14.17+	-0.0190*
	(147.65)	(9.03)	(0.0100)
Constant	-791.37	195.41	0.0906
No. of Observations	142	142	142
R^2	0.304	0.300	0.131
Anova F-Ratio	5.73**	5.61**	1.97*
Anocova F-Ratios			
Intercepts	0.27	0.76	0.88
Slopes	0.64	1.45	0.32
Homogeneity	0.59	1.37	0.38

** Significant at .01 level
* Significant at .05 level
+ Significant at .10 level

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well. These results are different from the expected results and seem to indicate that in the sample any kind of high school work experience, NYC or non-NYC, did not assist in improving post-high school earnings.

Cohort Analysis

The sample was selected to represent different age groups, thus, it is important to investigate if there is an NYC response difference associated with time. The basis for dividing the sample in this cohort analysis is the number of months the subject has been in the labor force; that is, the number of months since his exit from high school. Accordingly, the sample was grouped as follows:

Group	Exited from High School	Number
A	After Jan 1971	27
B	1 - 10 Mo. Before Jan 1971	28
C	11 - 20 Mo. Before Jan 1971	30
D	21 - 40 Mo. Before Jan 1971	32
E	40 Mo. Plus Before Jan 1971	35

These subsample groups are investigated according to the analysis of covariance used earlier in the subsample studies. This is the appropriate mode of analysis because NYC participants are compared with controls within cohort groups. The emphasis of this study is on determining how long the expected income and employment advantage to NYC participation lasts.

NYC earning gains are expected to behave like other human capital gains, producing an income advantage that is constant over time. That is, the increment of income of participants over controls is expected to persist indefinitely. There may be similar unemployment gains over time. These expectations, however, are not soundly established in theory or fact.

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Table 12 presents the results of the analysis of covariance of the cohort groups. The results indicate an improvement in total post-high school earnings for NYC participants of $2049.65 in the 1 - 10 months cohort. But this is offset by a $3276.01 income advantage to controls in the later 21 - 40 months cohort and $1771.86 advantage to controls in the more recent entrants to the job market. The image of these differences are also reflected in average monthly earnings, though not as pronounced.

The earning pattern suggested here is that if NYC is at all helpful to those with a full current earning period that it is accomplished within about 2 years (an estimate accounting for a current period of 14 - 16 months) after high school exit. After that time controls catch up to participants and surpass them.

However, it is clear that the conclusion of a 2 year temporary income gain in the post-high school period is not firmly established in the sample data. The cohort samples are too small in relation to the variability of the post-high school income measure.

SUMMARY

The following are the major results of NYC influence on labor market performance in the Houston sample.

1. NYC participation does not materially influence post-high school earnings or unemployment.

TABLE 12 - ANALYSIS OF COHORT GROUPS FOR LABOR MARKET PERFORMANCE

	Total Post High School Earnings				
	After 1971	1-10 Mo.	11-20 Mo.	21-40 Mo.	41 Mo. +
Sex: Male-Female	2096.93**	1442.47+	3417.24**	2120.88+	3422.41*
	(628.24)	(985.29)	(1266.66)	(1244.54)	(1511.15)
		[-0.399]	[0.822]	[0.015]	[0.724]
Race: Black-White	1506.52	-3020.33*	-2322.14	-1421.53	-4146.96**
	(1781.26)	(1615.17)	(1822.06	(2493.78)	(1556.65)
		[-1.173]	[-1.027]	[-0.722]	[-1.535+]
Mexican-White	1240.82	-1244.97	-1110.53	-677.28	-3402.22+
	(1576.55)	(1910.79)	(2209.93)	(2416.46)	(2023.65)
		[-0.670]	[-0.665]	[-0.519]	[-1.315+]
NYC: NYC Control	-1771.86*	2049.65*	44.78	-3276.01**	-363.09
	(1003.62)	(1143.35)	(1649.81)	(1523.33)	(1317.17)
		[1.652*]	[0.768]	[-0.643]	[0.623]
MStat: Single-Married	-665.96	2501.25+	-1734.65	-425.42	891.78
	(941.09)	(1450.45)	(1637.72)	(1425.24)	(1458.37)
		[1.299+]	[-0.472]	[0.110]	[0.696]
Other-Married	1589.38	6791.61**	2232.70	-480.91	2379.40
	(1676.25)	(2609.81)	(2401.66)	(3366.35)	(2002.09)
		[1.192]	[0.170]	[-0.473]	[0.214]
Education:	-61.23	81.06	211.12	-326.54	391.46+
	(350.39)	(269.48)	(458.28)	(403.60)	(289.04)
		[0.194]	[0.353]	[-0.350]	[0.631]
Constant	1545.33	332.35	32[illegible].09	8440.67	4088.21
No. Of Observations	27	28	30	32	25
R^2	0.486	0.412	0.465	0.299	0.443
Anova F-Ratio	2.57*	2.00	2.73*	1.46	1.93
Anocova F-Ratios					
Intercepts	2.65*				
Slopes	0.98				
Homogeneity	1.19				

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TABLE 12 - ANALYSIS OF COHORT GROUPS FOR LABOR MARKET PERFORMANCE (CONT'D)

	Average Post High School Earnings				
	After 1971	1-10 Mo.	11-20 Mo.	21-40 Mo.	41 Mo. +
Sex: Male-Female	194.44**	171.20*	261.10**	140.33*	175.43*
	(74.60)	(72.49)	(63.21)	(75.59)	(82.54)
		[-0.227]	[0.665]	[-0.532]	[-0.166]
Race: Black-White	26.65	-284.35*	-157.90*	-10.58	-192.09*
	(211.50)	(118.83)	(90.92)	(145.46)	(85.02)
		[-1.291+]	[-0.793]	[-0.147]	[-0.952]
Mexican-White	31.28	-232.44+	-75.62	-1.63	-105.45
	(187.20)	(140.58)	(110.27)	(140.95)	(110.53)
		[-1.139]	[-0.484]	[-0.143]	[-0.620]
NYC: NYC Control	-120.76	114.17+	11.51	-150.45+	-53.30
	(119.17)	(84.12)	(82.33)	(88.85)	(71.94)
		[1.627+]	[0.895]	[-0.203]	[0.228]
MStat: Single-Married	50.16	67.80	-67.23	-57.56	97.36
	(111.74)	(106.71)	(81.72)	(83.13)	(79.66)
		[0.116]	[-0.830]	[-0.786]	[0.338]
Other-Married	115.73	304.46+	83.10	-37.36	137.77
	(199.04)	(192.01)	(119.84)	(196.35)	(109.35)
		[0.693]	[-0.138]	[-0.560]	[0.096]
Education:	-14.38	-6.25	15.21	-18.74	49.20**
	(41.60)	(19.[illegible]	(22.87)	(23.54)	(15.73)
		[0.[illegible]	[0.614]	[-0.092]	[1.419+]
Constant	292.14	346.29	191.16	473.31	134.80
No. Of Observations	27	28	30	32	25
R^2	0.350	0.397	0.573	0.2509	0.534
Anova F-Ratio	1.45	1.88	4.22**	1.15	2.77*
Anocova F-Ratios					
Intercepts	1.85				

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TABLE 12- ANALYSIS OF COHORT GROUPS FOR LABOR MARKET PERFORMANCE (CONT'D)

	Percent of Time Unemployed				
	After 1971	1-10 Mo.	11-20 Mo.	21-40 Mo.	41 Mo. +
Sex: Male-Female	0.1599+ (0.1173)	-0.0279 (0.0825) [-1.683*]	0.0179 (0.0516) [-1.300+]	0.0283 (0.0715) [-1.186]	-0.0205 (0.0589) [-1.448+]
Race: Black-White	0.3734 (0.3325)	-0.2977* (0.1352) [-2.555**]	0.0708 (0.0742) [-1.193]	0.0899 (.1433) [-1.028]	0.0452 (0.0606) [-1.310+]
Mexican-White	0.0147 (0.2943)	-0.4648** (0.1599) [-1.899*]	-0.0075 (0.0900) [-0.092]	0.0597 (0.1389) [0.179]	-0.0090 (0.0788) [-0.099]
NYC: NYC Control	-0.1128 (0.1874)	-0.0509 (0.0957) [0.393]	-0.0105 (0.0672) [0.635]	0.0850 (0.0876) [1.234]	0.0597 (0.0513) [1.120]
MStat: Single-Married	0.3082* (0.1757)	-0.0318 (0.1214) [-2.050*]	0.0410 (0.0667) [-1.734*]	0.0753 (0.0819) [-1.559+]	0.0332 (0.0568) [-1.806*]
Other-Married	0.0476 (0.3129)	-0.0054 (0.2184) [-0.178]	-0.0409 (0.0978) [-0.344]	-0.0896 (0.0896) [-0.460]	-0.0219 (0.0780) [-0.277]
Education:	-0.1366* (0.0654)	-0.0239 (0.0226) [2.253*]	-0.0269+ (0.0187) [2.087*]	-0.0103 (0.0232) [2.447**]	-0.0006 (0.0112) [2.782**]
Constant	0.5111	0.6644	0.1521	-0.0235	-0.0259
No. of Observations	27	28	30	32	25
R^2	0.342	0.394	0.199	0.128	0.175
Anova F-Ratio	1.41	1.86	0.78	0.50	0.52
Anocova F-Ratios					
Intercepts	1.46				
Slopes	1.02				
Homogeneity	1.08				

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2. The NYC and control group yield similar relations between the labor market performance criteria and the non-NYC explanatory factors. Only the age coefficient is significantly different between the equations for the NYC and control groups. Generally, other than this exception, there is no reason to believe there is a flaw in the experimental design based on the selected variables. The two groups could be different on the basis of other factors not measured.

3. When males and females are compared with controls of their own sex, NYC does not improve post-high school earnings or reduce unemployment.

4. Neither does NYC raise earnings or lower employment for the races taken separately. The white subsample as well as several other subsamples were not large enough to make reliable estimates with the specified model.

5. There was no significant improvement in NYC effect on economic performance considering summer-only versus school year components. Those school year components with more than twelve months NYC experience performed well below the controls.

6. High School employment of any kind does not appear to improve post-high school earnings. Nor did private sector high school employment do any different than NYC employment with the exception of a possible increase in post-high school unemployment for NYC participants whether or not they had non-NYC work experience in school.

7. The cohorts varied wildly with respect to NYC effect on earnings, and while the cohorts suffer because of their

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[illegible] in mind, a pattern was suggested of temporary post-high school earning benefits due to participation in WYO not washing out within two years of their exit date from high school.

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CHAPTER 4

ANALYSIS OF EDUCATIONAL PERFORMANCE

The main problem of this study is to estimate the influence of NYC on the earning capacity of participants. Earning capacity is not only measured by current income rates but also by improving the skill and abilities of youths through education. The legislative goal of the NYC program is to assist youths in completing their high school education and, thereby, improve their lifetime income. This chapter measures the role of NYC in the attainment of a highschool education, as well as its role in leading to additional post-high school education.

The analysis of the educational performance of the sample in this chapter is divided into three parts: (1) The multiple regression analysis of the influence of several factors including NYC participation on high school graduation, college attendance and vocational training after high school. (2) The analysis of covariance of subsets of the total sample partitioned according to NYC status, Sex and Race; and (3) An investigation of three additional aspects of NYC participation on educational propensities. These three aspects include: the separation of the NYC influence on educational gains by type and duration, the distinction of the sources of high school employment experience as educational determinants and a cohort investigation or intra-temporal comparisons of the NYC influence.

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The basic analytical model used on the sample data is described by equation (1):

$$Y_{ji}=b_o b_1 X_{1i}+b_2 X_{2i}+b_3 X_{3i}+b_4 X_{4i}+b_5 X_{5i}+b_6 X_{6i}+b_7 X_{7i}+b_8 X_{8i}+u_i \quad (1)$$

where: X_1=Age, a continuous variable measuring the ith subject in years as of December 31, 1971

X_2=Sex, Male = 1, Female = 0

X_3=Race, Mexican-American = 1, Other = 0

X_4=Race, Black = 1, Other = 0

X_5=NYC Status; NYC participant = 1, Control = 0

X_6=Household Head; the relation of the ith subject who was claimed as the head of the family during the high school period; mother = 1, Other = 0

X_7=Household Head, Other (step-parents, grandparents aunts, etc.) = 1, Other = 0

X_8=Education Level of Family Head, a scale variable from 1 to 11 representing the highest level of education attained by the household head

Y_j=Educational Performance Criteria[1]

Y_1=High School Graduation, a dummy variable indicating whether or not the ith subject terminated high school as a graduate or a dropout; Graduate = 1, Dropout = 0

Y_2=College Attendance, a dummy variable indicating whether or not the ith subject attended college and attained at least one college credit; ever attended college = 1, Other = 0

Y_3=Vocational Training, a dummy variable indicating whether or not the ith subject attended more than two weeks of vocational training of any kind in the post-high school period; ever attended vocational training = 1, Other = 0

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[1] Each of the performance criteria in this set is a dummy variable and represents the ex post probability of being included in the individual set described. Discriminant analysis would have been more appropriate for this study especially for tests assuming normality in distributions of Y_j and b's. Phoebus J. Dhrymes, Econometrics Statistical Foundations and Applications, (Harper and Row, 1970), p. 76.

u_i = Error term

i = 1. . .N observations

$b_0, b_1, \ldots, b_3$ = Regression coefficients

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EXPECTATIONS

It is important not only to calculate the estimates of the regression coefficients for equation (1) but also to compare the findings to a priori appraisal and related empirical estimates of the individual relationships. This section presents the basis for that comparison through an examination of the expected relation between NYC status, Age, Sex, Race, Head of Household and Parental Education on the educational performance criteria.

NYC Status

The effect of NYC participation on the high school graduation rate has been the focus of attention of several studies like the GAO Review.[2] But these make only gross comparisons between an NYC group and a control group without the benefit of multivariate analysis to control for other determinants of dropout behavior. The Somers and Stromsdorfer nationwide study of the in-school NYC is the most carefully designed study to date and is comparable with the present study as far as using control group design together

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[2] Comptroller General of the United States Difficulties of the Neighborhood Youth Corps In-School Program and Its Management Problems, B-130515, (U.S. General Accounting Office: Washington, D.C., Feb 20, 1973). This review included the Houston NYC Program, as well as others, indicating a dropout rate of 10% for both participants and controls in Harris County, p. 15.

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with multivariate analysis of high school graduation rates and other post-high school educational attainment.[3]

The evidence of Somers and Stromsdorfer suggests that the basic legislative premise of NYC is incorrect, i.e., that NYC intervenes meaningfully in the assumed link between the economic distress of low-income families and dropout behavior of their youths.[4] Indeed they suggest that NYC may have the effect of encouraging labor force participation of NYC youths immediately without waiting for graduation. This might be expected to negate or even reverse the hypothesized positive effect of NYC on graduation rates.

Their study indicated the coefficient for NYC in the total sample was insignificant.[5] In the male subsample, participation in the NYC program reduces high school graduation probability by 6%.

On the other hand, NYC played a positive role in post high school educational efforts among high school graduates in this national sample. Participation in NYC was associated with a 12.5% increase in the probability of attending college and a 6.5% increase in the probability of other post high school training. (This latter significant only at the .10

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[3] Gerald I. Somers and Ernst W. Stromsdorfer, A Cost-effectiveness Study of the In-School and Summer Components of Youth Opportunity Programs, (Industrial Relations Research Institute (Univ. of Wisconsin, 1970).

[4] Ibid., Chapter 6, especially pp. 217, 226 and 232.

[5] Ibid., p. 214, Table 7).

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level.) The trends toward more post-high school education were more pronounced in the male subsample than the female.[6]

Sex

Males are expected to have a higher dropout rate than females according to gross statistics. Nam, et al., for example, indicates a gross non-enrollment rate for males of 10.6% and for females 10.4% in a nationwide study.[7] But Somers and Stromsdorfer in their controlled study of NYC participation indicated that males are 3% more likely to graduate from high school compared with females, other factors held constant.[8]

For continuing education efforts, Somers and Stromsdorfer indicate that boys are 17% more likely to attend college and 11.5% more likely to be involved with other post-high school training than girls.[9]

Race

Gross dropout rates indicate blacks more prone to drop out of high school than whites. But Nam, et. al., shows that gross racial difference is hiding regional, religious and socio-economic differences. When controlled for these factors, racial characteristics are of minor importance.[10] This

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[6] Ibid., p. 238, Table 45.

[7] Charles B. Nam, A. Lewis Rhodes and Robert E. Herriott, "School Retention by Race, Religion and Socioeconomic Status," Journal of Human Resources (Spring 1968), Vol. 3, p. 173, Table 1.

[8] Somers and Stromsdorfer, A Cost Effectiveness Study, p. 214, Table 39.

[9] Ibid., p. 238, Table 45.

[10] Nam, et. al., School Retention, p. 190.

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conclusion was verified by Somers and Stromsdorfer for black-white differences in graduation probabilities. However, Mexican-American males had an 11% greater chance of high school graduation compared with white males.[11]

College attendance propensity presented a more favorable picture for blacks in the national NYC study; blacks showed a 27% greater probability of attending college than whites.[12] Also, this was a result of higher college attendance for both male and female blacks. No difference was noted for post-high school vocational training among whites, blacks and Mexican-Americans in the total samples.

Household Head

Cervantes presents a profile of the family of a high school dropout as including possibly a divorced mother trying to handle too many children, parents who are inconsistent in affection and discipline, an unhappy family situation, and a weak or absent father figure.[13] Thus, it is expected that if the respondent picked someone other than the father as the head of the household during the time the respondent was in high school, it would be an indication of a broken or unhappy family situation. Thus families headed by the mother or someone else are expected to yield a lower high school graduation probability.

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[11] Somers and Stromsdorfer, A Cost-Effectiveness Study, p. 214, Table 30.

[12] Ibid, p. 333, Table 45.

[13] Dudley P. Cervantes, The Dropout: Causes and Cures (Ann Arbor, Univ. of Michigan Press, 1965), pp. 138-9.

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Education of Head

The socioeconomic status of parents is shown by Nam to be a rather important factor in high school retention.[14] It is recognition of this fact that led to the concept of WTO. In this study the education level of the head of the household is taken as representative of socioeconomic status. As such, it is expected to be positively related to graduation propensity.

Somers and Stromsdorfer indicated that high school graduation probability increased by 0.4% for each year of school the father completed.[15] For college attendance, this factor was even more important; the probability of college attendance rose 1% with each year of school gained by the father.[16] There was no effect of paternal education on vocational school attendance.

Age

Age is not expected to bear a strong relation to educational performance. Understandably, the older the subject, the greater the opportunity for successful performance, particularly with post-high school educational attendance. Somers and Stromsdorfer found high school probability increased by 1% with each year of age of the subject. Consequently, this factor is presumed to be positively related to educational performance.

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[14] Nam, et. al., School Retention, p. 178, Table 1 and p. 188, Table 9.

[15] Somers and Stromsdorfer, A Cost-Effectiveness Study, p. 214, Table 39.

[16] Ibid, p. 238, Table 45.

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EDUCATIONAL ATTAINMENT OF THE TOTAL SAMPLE

The estimates of the three equations of educational performance for the total sample are given in Table 13. These equations attempt to estimate the probability of inclusion in each of the three educational performance classes respectively, that is, high school graduate, attendance at a college and participation in some form of vocational preparation. The table lists a number of factors which produce the total probability estimate and these factors are described by a numerical coefficient that gives the contribution of the individual factor to the total probability of inclusion in the respective education group. The coefficients are discussed below in order of their significance.

Sex

The results indicate that males have a lower probability of graduating from high school than females. In fact, the difference in the probability that a female will graduate is about .22% higher than that of a male when other factors are accounted for. This result is larger than expected but in relation to national estimates.

Education of Household Head

The education level of the parent whom subjects named as the head of the family while they were in high school, played a significant role both in high school graduation, as well as college attendance. In the former, the probability of graduation increased 4% for each grade level the parent

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TABLE 13- ANALYSIS OF EDUCATIONAL ACHIEVEMENT FOR THE TOTAL SAMPLE

Characteristic	High School Graduation (1)	College Attendance (2)	Vocational Education (3)
Age	.02112 (.02145)	.02617+ (.02003)	.01961 (.02375)
Race			
Mexican-White	.17774+ (.13494)	.06970 (.12604)	.11847 (.14945)
Black-White	.25271* (.12437)	.21196* (.11617)	.16284 (.13775)
Sex			
Male-Female	-.21853** (.07833)	-.03150 (.07316)	-.08290 (.08675)
NYC Status	.06097 (.08382)	-.04088 (.07829)	-.11756 (.09283)
High School Head			
Mother-Father	-.10212 (.08432)	.12802+ (.07829)	.12547+ (.09339)
Other-Father	-.18912+ (.14167)	-.12032 (.13233)	.14006 (.15690)
Education of Head	.03969** (.01586)	.02692* (.01482)	.00696 (.01757)
Constant	-.03634	-.59675	0.18037
Number of Observations	142	142	142
R^2	.13716	.14609	.05234
SEE	.43174	.40328	.47819
F-Ratio	2.64**	2.84**	0.918

\+ Significant at .10 level
* Significant at .05 level
** Significant at .01 level

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achieved. This would mean that sons and daughters of parents with a high school diploma had a 20% better chance of completing high school than offspring of parents with a sixth grade education. And the child of a parent with a college degree would mean a 16% greater chance that the youth would finish high school compared with the same youth if his parent only had a high school education. Similarly, the chance that a youth would attend college is raised by 3% for each level of education his parent achieves. These results verify the significance of socioeconomic status in predicting high school graduation.

Race

While whites on the average outperformed their minority counterparts in earnings and unemployment, the evidence of this sample indicates they did so with less educational achievement. Blacks had a 25% higher probability to graduate from high school, and a 21% higher probability to attend college, than did whites. Mexican-Americans also had a higher high school graduation probability than whites. This means, of course, white dropout rates were significantly higher than the minority races, when controlled for other factors. These results are similar to those of Somers and Stromsdorfer.

High School Household Head

The relation of the individual to this subject was also a factor, although not as significant as others mentioned in

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educational attainment. Consequently, a child raised by a grandparent, aunt, stepparent, etc., had a lower chance of completing high school than if the child had been raised where the father was the head of the family. This result is to be expected.

On the other hand, youths from families with a mother at the helm showed a better college and vocational school participation record compared with those that had a father as head. Mothers, perhaps, are more prone to self-sacrifice for their children's education and better able to impart simple values of attainment through education than are fathers or others.

NYC participation

Participation in NYC does not appear in the sample to be a significant factor in achieving a high school diploma after differences due to other factors are considered. Apparently other causes for dropping out overshadow strictly economic privation so that the income NYC provides does not in any significant way reduce the dropout rate.

NYC INFLUENCE AND INTERACTION WITHIN SELECTED SUBSAMPLES

The problem of appraising the influence of NYC participation on education from the sample data is enhanced by comparing estimates of equation (1) between subsamples of the total data set. In particular, to use the methods of covariance analysis as described in Chapter II on methodology,

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on partitions of the total data set divided according to NYC status, sex, and race.

The analysis of covariance includes three features: (1) the multiple regression estimate of equation 1 for the individual subsamples which provide tests of significance of the coefficients and analysis of variance (ANOVA) test for the whole relation; (2) the analysis of covariance (ANOCOVA) tests of commonality between the equations derived on the subsamples; and (3) the individual tests of differences between like coefficients from the subsample equations. The first partition of the sample considered is according to NYC status.

NYC Status

The analysis of covariance between the NYC and control groups is important because it may detect disturbing influences on the intended experimental design; that is, that the two groups may be somehow basically different from one another. But according to the ANOCOVA F-Ratios of Table 14; the hypothesis of commonality of the two equations, one for the NYC Group and one for the control group, estimating high school graduation probability cannot be rejected. That is the F-Ratio of 1.29 for homogeneity of the two equations is less than the critical value of 1.94 (with 8 and 126 degrees of freedom at the .05 level of significance). Similar results are evident for the other sets of equations.

However, there were two specific coefficients for which there was a difference in the equations estimating high school

TABLE 14- COVARIANCE ANALYSIS OF NYC STATUS ON EDUCATIONAL PERFORMANCE

Characteristic	High School Graduation		Attended College		Attended Vocational School	
	NYC	Control	NYC	Control	NYC	Control
Age:	0.0499* (0.0264)	-0.0297 (0.0419) [1.656*]	0.0353+ (0.0258)	-0.0061 (0.0377) [0.899]	0.0265 (0.0296)	0.0310 (0.0468) [-0.083]
Sex: Male-Female	-0.2055* (0.0902)	-0.2371+ (0.1579) [0.180]	-0.0580 (0.0882)	0.0246 (0.1419) [-0.491]	0.0082 (0.1009)	-0.3030* (0.1762) [1.583+]
Race: Black-White	0.3146* (0.1729)	0.2321 (0.2005) [0.318]	0.0787 (0.1690)	0.3561* (0.1801) [-1.119]	0.2377 (0.1934)	0.0790 (0.2237) [0.548]
Mexican-White	0.1442 (0.1872)	0.2907+ (0.2117) [-0.529]	-0.1064 (0.1830)	0.2306 (0.1902) [-1.272]	0.2123 (0.2094)	0.0891 (0.2362) [0.398]
Head: Mother-Father	-0.0630 (0.0982)	-0.1741 (0.1674) [0.592]	0.1297+ (0.0960)	0.1169 (0.1504) [0.071]	0.1043 (0.1098)	0.1770 (0.1868) [-0.346]
Other-Father	-0.0108 (0.1733)	-0.4605* (0.2497) [1.522+]	-0.0898 (0.1694)	-0.1350 (0.2244) [0.160]	0.2760+ (0.1939)	-0.1744 (0.2786) [1.363+]
Education of Head:	0.0197 (0.0190)	0.0807** (0.0291) [-1.807*]	0.0201 (0.0186)	0.0392+ (0.0262) [-0.593]	0.0214 (0.0213)	-0.0263 (0.0325) [1.264]

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TABLE 14- COVARIANCE ANALYSIS OF NYC STATUS ON EDUCATIONAL PERFORMANCE (CONT'D)

	High School Graduation		Attended College		Attended Vocational School	
	NYC	Control	NYC	Control	NYC	Control
Constant	-0.5396	0.8569	-0.6498	-0.1132	-0.6243	-0.1123
No. of Observations	103	39	103	39	103	39
R^2	0.139	0.300	0.132	0.268	0.267	0.172
Anova F-Ratio	2.19*	1.90	2.06	1.62	0.97	0.92
Anocova F-Ratios:						
Intercepts		0.53		0.27		1.60
Slopes		1.39		0.50		1.04
Homogeneity		1.29		0.47		1.11

\+ Significant at .10 level
* Significant at .05 level
** Significant at .01 level

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graduation. The two were the education level of the household head and age with t-scores of differences between coefficients of -1.807 and 1.656 respectively.

These figures indicate that the education level of the head of the family was more influential among the subjects in the control group than the subjects of the experimental group in leading to high school graduation. Also, the graduation rate was higher for the older subjects in the NYC group than younger ones; this trend was not evident among the controls.

The important question is why these differences are present and whether or not they are associated in any way through the method of choosing the control group, any kind of self-selection bias or other similar disturbing influence on the intended experimental design. But no such explanation is readily apparent, and the reason for these differences remains unanswered.

Sex

There is a significant structural difference with respect to the propensity to graduate from high school between the intercept terms of two equations, one estimated with just the male subjects and the other with only the female subjects. Table 15 shows a covariance F-Ratio of 7.78, the highest any observed in the entire analysis. This difference essentially expresses the same relationship as the sex coefficient for the total sample given in Table 13. That is that other things considered, females are more likely to graduate from high school

TABLE 15- COVARIANCE ANALYSIS OF SEX ON EDUCATIONAL PERFORMANCE

Characteristic	High School Graduation		Attended College		Attended Vocational School	
	Male	Female	Male	Female	Male	Female
Age:	0.0482 (0.0548)	0.0100 (0.0236) [0.690]	0.0752+ (0.0488)	0.0198 (0.0225) [1.063]	0.0993* (0.0521)	-0.0009 (0.0275) [1.669*]
Race: Black-White	0.3432+ (0.2388)	0.1935 (0.1507) [0.558]	0.1294 (0.2127)	0.2263+ (0.1439) [-0.388]	0.0448 (0.2271)	0.2688+ (0.1757) [-0.770]
Mexican-White	0.1808 (0.2987)	0.1588 (0.1588) [0.069]	-0.0935 (0.2660)	0.0710 (0.1516) [-0.556]	0.1487 (0.2840)	0.1107 (0.1850) [0.110]
NYC Status:	0.0126 (0.1565)	0.0916 (0.1029) [-0.442]	-0.1158 (0.1394)	0.0012 (0.0982) [-0.704]	0.1020 (0.1488)	-0.2517* (0.1199) [1.829*]
Head: Mother-Father	-0.0805 (0.1592)	-0.1091 (0.1028) [0.158]	0.1478 (0.1428)	0.1307+ (0.0982) [0.102]	0.2433+ (0.1513)	0.0352 (0.1198) [1.065]
Other-Father	-0.1355 (0.3821)	-0.1882 (0.1537) [0.138]	-0.1337 (0.3403)	-0.1156 (0.1468) [-0.051]	0.1849 (0.3633)	0.0560 (0.1791) [0.312]
Education of Head:	0.0522+ (0.0372)	0.0291+ (0.0181) [0.595]	0.0119 (0.0331)	0.0377* (0.0172) [-1.380+]	0.0005 (0.0353)	0.0062 (0.0210) [-0.136]

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TABLE 15- COVARIANCE ANALYSIS OF SEX ON EDUCATIONAL PERFORMANCE (CONT'D)

	High School Graduation		Attended College		Attended Vocational School	
	Male	Female	Male	Female	Male	Female
Constant	-0.9228	0.2675	-1.2787	-0.5529	-2.0652	0.3400
No. of Observations	50	92	50	92	50	92
R^2	0.172	0.082	0.136	0.191	0.145	0.090
Anova F-Ratio	1.25	1.07	0.94	2.84**	1.02	1.18
Anocova F-Ratios						
Intercepts		7.78**		0.19		0.91
Slopes		0.36		0.56		1.21
Homogeneity		1.26		0.51		1.18

\+ Significant at .10 level
* Significant at .05 level
** Significant at .01 level

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than males. Notice there is no such significant difference for college or vocational school participation or the other, non-intercept coefficients in the high school graduation example.

The individual comparisons of coefficients between the two equations on the sexes yields one difference worth mentioning--that is with respect to the influence of NYC on vocational school attendance. Table 15 shows that among females there is a 25% lower probability that NYC participants will attend vocational training in the post-high school period compared to the controls. Whereas the comparison of male participants with male controls yields no significant difference, as far as vocational school attendance is concerned.

One possible reason for this is that for females, the NYC provided a minimal form of on-the-job training which substituted for post-high school training. And at least allowed them a start in the working world. But NYC jobs for males do not provide the same start because of the more menial quality of jobs allocated to them. This does not mean the youth would not have benefited more from additional skill training.

Race

The F-Ratio for covariance analysis between the three racial categories, as shown in Table 16, for college attendance indicate an intercept difference. The reason for this is that college attendance for Blacks was considerably above that of whites and Mexican-Americans, as was discussed in connection with the race coefficient in Table 13.

TABLE 16 - COVARIANCE ANALYSIS BY RACE FOR EDUCATIONAL PERFORMANCE

Characteristic	High School Graduation			Attended College		
	White	Mexican	Black	White	Mexican	Black
Age:	-0.0302	0.0755+	0.0338	0.0578	0.0510*	0.0124
	(0.0995)	(0.0489)	(0.0266)	(0.0706)	(0.0281)	(0.0332)
		[1.092]	[0.704]		[-0.073]	[0.515]
Sex: Male-Female	-0.4413	-0.3522**	-0.1719*	-0.1200	0.0193	-0.1023
	(0.3265)	(0.1432)	(0.0996)	(0.2315)	(0.0824)	(0.1241)
		[0.286]	[0.889]		[0.462]	[0.060]
NYC Status:	0.1121	-0.0821	0.1433+	0.1532	-0.1447+	-0.0715
	(0.3457)	(0.1697)	(0.1097)	(0.2451)	(0.0976)	(0.1366)
		[-0.578]	[0.097]		[-0.913]	[-0.718]
Head: Mother-Father	-0.1028	0.0462	-0.1613*	0.3126	0.2025*	0.0826
	(0.4391)	(0.1900)	(0.0964)	(0.3113)	(0.1092)	(0.1201)
		[0.357]	[-0.148]		[-0.272]	[-0.601]
Other-Father	-0.0405	0.1363	-0.3671*	0.2900	-0.1122	-0.2167
	(0.6352)	(0.2548)	(0.1850)	(0.4504)	(0.1465)	(0.2303)
		[0.297]	[-0.557]		[-0.695]	[-0.891]
Education of Head:	0.1154	-0.0143	0.0550**	0.0879+	0.0079	0.0353+
	(0.0773)	(0.0294)	(0.0204)	(0.0548)	(0.0169	(0.0256)
		[-1.802*]	[-0.856]		[-1.146]	[-0.768]
Constant	0.6538	-0.7352	-0.1737	-1.7718	-0.9475	-0.0642
No. of Observations	16	48	78	16	48	78
R^2	0.443	0.166	0.154	0.369	0.174	0.056
Anova F-Ratio	1.19	1.36	2.16+	0.88	1.44	0.70
Anocova F-Ratios						
Intercepts	2.09			2.31+		
Slopes	1.22			0.40		
Homogeneity	1.35			0.66		

TABLE 16- COVARIANCE ANALYSIS BY RACE FOR EDUCATIONAL PERFORMANCE (CONT'D)

Characteristic	Attended Vocational School		
	White	Mexican	Black
Age:	0.0106	-0.0124	0.0452+
	(0.0903)	(0.0501)	(0.0337)
		[-0.209]	[0.334]
Sex: Male-Female	-0.2230	0.0595	-0.1770+
	(0.2961)	(0.1468	(0.1260)
		[0.799]	[0.133]
NYC Status:	-0.1694	-0.1172	-0.0554
	(0.3135)	(0.1739)	(0.1387)
		[0.136]	[0.311]
Head: Mother-Father	0.4[illegible]	-0.0934	0.1576+
	(0.3982)	(0.1947)	(0.1220)
		[-1.238]	[-0.750]
Other-Father	1.0692*	-0.1030	0.1452
	(.05761)	(0.2611)	(0.2339)
		[-[illegible].728*]	[-1.385+]
Education of Head:	0.0555	0.0114	0.0169
	(0.0701)	(0.0301)	(0.0259)
		[-0.539]	[-0.481]
Constant	-0.3805	0.6055	-0.6481
No. of Observations	16	48	78
R^2	0.398	0.030	0.079
Anova F-Ratio	0.99	0.21	1.02
Anocova F-Ratios			
Intercepts	0.70		
Slopes	0.62		
Homogeneity	0.64		

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The effect of NYC participation within racial groups is also presented in Table 16. Here it can be seen that NYC participation for Black participants compared to Black controls yielded some positive influence on high school graduation rates. Whereas NYC participation for Whites and Mexican-American had no significant influence on high school graduation probability. Thus Blacks moreso than Mexican-Americans and Whites berefit from the NYC program.

Also Table 16 indicates that Mexican-American NYC participants have a lower probability to attend college than Mexican-American controls.

There is significant interaction between race and the education level of the parent. In the Black subsample there is a 5.5% increase in graduation probability for each grade level the parent attains. The White and Mexican-American responses to this factor are different enough from each other to yield a t-score of -1.802. Thus parental education is relatively more important among White youths than Mexican-American youths.

ADDITIONAL INVESTIGATION

An additional set of estimates were made on the sample data in an attempt to find out more about the possible impact of NYC participation and related high school work activity upon the educational performance of the subjects. These estimates included: (1) an attempt to identify any difference in the educational performance of the NYC participants

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because they gained work experience in the summer vacation months as opposed to part-time work experience during the school year. Also, for the latter group whether there was a difference in educational response because of the duration of their job; (2) a comparison of NYC versus non-NYC high school work experience as possible determinants of educational performance; and (3) the cohort effect or the possible temporal differences in educational response over time. The additional investigations for educational performance follows the same pattern as that of Chapter 3 for earnings and employment.

Type and Level of NYC Experience

The first experiment estimates the difference in educational performance associated with two segments of the NYC program. First, there is the school-year segment where the NYC experience is attained through part-time after school employment during the nine months of the regular school year. Second, there is the summer-only segment which is often full time employment during the summer vacation period. The question is whether school-year participation is more conducive to graduation from high school and other measures of educational performance than summer-only participants.

The estimates, in addition to describing the effect of the type of NYC participation, also appraises the effect of the months of experience of school-year participants on educational performance. The essential question here is does the likelihood of high school graduation or post-high school educational efforts improve with more NYC experience.

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There is some question about the ability of the summer NYC program to get youths back to school in the fall. NYC counselors and job supervisors may lose contact for weeks with the youth after the end of the work period, and before the start of school. However in the school year program, the youth has an added factor to consider in his potential decision to drop out of school--he will lose his NYC job. Therefore, it is expected that youth participation in the school year component should yield a higher graduation factor than summer-only youths.

But Somers and Stromsdorfer did not find the expected results. In the total sample among school year subjects NYC participation decreased probability of graduation by 3% (this significant at only the .10 level). The summer program had no effect on graduation probability compared with controls.[17]

The duration of school year enrollment is expected to be positively associated with the high school graduation propensity. Longer NYC enrollments mean more months of high school education and the closer the individual is to graduation the less likely he would be to leave prematurely. Somers and Stromsdorfer's results agree with the expected values; length of NYC enrollment is positively related to the probability of high school graduation and the probability of college attendance.[18]

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[17] Somers and Stromsdorfer, A Cost-Effectiveness Study, p. 232, Table 44.

[18] Ibid, p. 249, Table 48.

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For this experiment, the estimates were derived similar to those of Table 13, with the exception that the control group was compared to NYC participants in three groups defined according to the type and level of NYC experience. The three groups included one for summer only participants, one school year group with twelve months or less of NYC experience, and another school year group with more than twelve months of NYC experience. Table 17 shows the NYC coefficients in this equation. In each case, these coefficients are best interpreted as the probability differential of being in the NYC group compared with the controls. The other coefficients in the equation are essentially the same as Table 13.

The results indicate that in-school participants with more than twelve months experience had a greater probability of high school graduation compared with the controls. This latter result would seem to suggest that the NYC program achieves its short-run objective of reducing the dropout rate providing the youths stay with it. Neither summer or short-term school year participants did any different than controls in this sample. There is a suggestion that the school-year segment had a greater holding power compared with the summer program if the participant stayed with it.

Summer-only NYC experience is negatively associated with post-high school involvement in vocational training compared with controls. There is no apparent reason for this result. Certainly the summer group would not be expected to be better prepared vocationally as a result of the NYC, than the in-school groups.

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To check the possibility that the three NYC groups were themselves from different populations, a covariance analysis across these groups was appropriate. The F-Ratios for analysis of covariance for the type and level of NYC experience, presented in Table 17, do not indicate a significant overall structural shift associated with the current experiment for any of the education variables.

The Composition of High School Employment

The second experiment was constructed to investigate the role of high school employment, NYC or non-NYC, in the advancement of educational performance. The idea was to observe if the composition of high school employment played a significant role in educational propensities or, indeed, if high school employment of any kind is conducive to educational achievement.

If relieving economic stress is the main target of NYC to enable high school youths to graduate, then it would be expected that the youths themselves would seek the same solution in the free labor market to the extent that it was available to them. By the same logic, the voluntary non-NYC employment in high school should be associated with a higher graduation rate for low-income youth.

The above argument, taken alone, would seem to mean it is irrational for a high school youth from a poor family not to want to secure employment. And those that do not work in high school should be classified as unemployed or discouraged.

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TABLE 17 - THE EFFECT OF THE TYPE AND LEVEL OF NYC EXPERIENCE ON EDUCATION PERFORMANCE

Characteristic	High School Graduation	College Attendance	Vocational School Attendance
Age:	0.0196	0.0270+	0.0185
	(0.0215)	(0.0202)	(0.0239)
Sex: Male-Female	-0.2108**	-0.0344	-0.0799
	(0.0785)	(0.0738)	(0.0874)
Race: Black-White	0.2499*	0.2099*	0.1687
	(0.1247)	(0.1171)	(0.1388)
Mexican-White	0.1618	0.0736	0.1167
	(0.1354)	(0.1273)	(0.1508)
NYC: Summer Only	-0.0214	0.0100	-0.1953+
	(0.1218)	(0.1145)	(0.1356)
School Yr: 12 Mo. or Less	0.0318	-0.0487	-0.0873
	(0.0982)	(0.0923)	(0.1093)
School Yr: More Than 12 Months	0.1321+	-0.0569	-0.1129
	(0.0995)	(0.0935)	(0.1108)
Head: Mother-Father	-0.1075	0.1274+	0.1293+
	(0.0847)	(0.0796)	(0.0942)
Other-Father	-0.1721	-0.1211	0.1343
	(0.1428)	(0.1342)	(0.1589)
Education of Head:	0.0375**	0.0278*	0.0060
	(0.0160)	(0.0150)	(0.0178)
Constant	0.0115	-0.6174	-0.1551
No. of Observations	142	142	142
R^2	0.150	0.149	0.057
Anova F-Ratio	2.31*	2.28*	0.79
Anocova F-Ratios			
Intercepts	0.84	0.22	0.75
Slopes	1.11	0.60	1.11
Homogeneity	1.08	0.55	1.07

\+ Significant at .10 level
* Significant at .05 level
** Significant at .01 level

Thus dropping out of school to go to work is a reasonable solution. This investigation looks at the whole pattern of high school employment, NYC and non-NYC, toward improving graduation chances.

In order to conduct this investigation, a set of dummy variables was set up placing each subject in one of four categories: those that had only NYC work experience while in high school, those that had only non-NYC or private sector work experience, those that had some of both NYC and non-NYC work experience and those that had no work at all during the high school months. This set of dummy variables replaced the simple NYC variable of Table 13 and together with all the other determining variables was used to try to isolate the effect of the kind of high school employment on high school graduation, college attendance and vocational participation.

Table 18 shows the coefficients of this dummy set. These coefficients are interpreted as differential contributions to inclusion in the educational performance set between the work category listed and having no high school work whatsoever. Those that had a combination of NYC and non-NYC work had a 25% higher probability of graduating from high school than did those that did not work at all, other factors held constant. Also, those with only non-NYC work experience were more likely to graduate than those with no work experience. While those with only NYC work were not significantly different from the ones that did not work at all.

TABLE 19- THE EFFECT OF THE COMPOSITION OF HIGH SCHOOL EMPLOYMENT ON EDUCATIONAL PERFORMANCE

Characteristic	High School Graduation	College Attendance	Vocational School Attendance
Age:	0.0248 (0.0215)	0.0252 (0.0203)	0.0187 (0.0240)
Sex: Male-Female	-0.2635** (0.0851)	-0.0236 (0.0802)	-0.0784 (0.0950)
Race: Black-White	0.2775* (0.1253)	0.1988* (0.1180)	0.1460 (0.1399)
Mexican-White	0.2302* (0.1382)	0.0537 (0.1302)	0.1022 (0.1543)
NYC: NYC Only	0.1508 (0.1456)	-0.1154 (0.1372)	-0.222+ (0.163)
NYC and Non-NYC	0.2566* (0.1457)	-0.1249 (0.1373)	-0.2179+ (0.1627)
Non-NYC Only	0.2120+ (0.1576)	-0.1149 (0.1485)	-0.1477 (0.1760)
Head: Mother-Father	-0.0830 (0.0848)	0.1220+ (0.0799)	0.1192 (0.0947)
Other-Father	-0.1967+ (0.1427)	-0.1097 (0.1344)	0.1560 (0.1593)
Education of Head:	0.0395** (0.0158)	0.0271* (0.0149)	0.0073 (0.0177)
Constant	-0.2826	-0.4854	-0.0449
No. of Observations	142	142	142
R^2	0.156	0.150	0.057
Anova F-Ratio	2.42**	2.31*	0.79
Anocova F-Ratios			
Intercepts	1.15	0.29	0.77
Slopes	1.18	0.66	0.60
Homogeneity	1.18	0.61	0.62

\+ Significant at .10 level
* Significant at .05 level
** Significant at .01 level

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The Cohort Effect

A third experiment was conducted by breaking the sampl into cohorts according to the length of time the subjects had been out of high school. By analyzing these groups, the possibility of temporal differences could be identified together with possible interactions associated with time. The cohorts are described as follows:

Cohort	Time of Exit From High School	Number
A	After Jan 1971	27
B	1-10 Before Jan 1971	28
C	11-20 " " "	30
D	21-40 " " "	32
E	41 plus " " "	25

There is no a priori expectation associated with the cohort analysis. Since the basis for separating the groups is temporal it would be important to look for a trend or tendency in the results, whether or not NYC is becoming more or less effective over the life of the program.

Table 19 presents the results of the cohort analysis. Equation 1 (without the age variable) is used on each of the subsets of observations that makes up a cohort. The pattern of analysis is identical to that of subsample analysis.

There is one NYC coefficient that stands out: the most recent cohort. NYC participation in this group compared with controls is associated with a lower probability of graduation from high school. Other coefficients do not indicate NYC participation improves high school graduation chances for any cohort group. There is no observable trend.

TABLE 19- ANALYSIS OF COHORT GROUPS FOR HIGH SCHOOL GRADUATION

Characteristic	High School Graduation				
	After Jan.1971	1-10 Months	11-20 Months	21-40 Months	40 Months Plus
Sex: Male-Female	0.0920 (0.1596)	-0.3752* (0.1565) [-1.736+]	-0.3356* (0.1730) [-1.599+]	-0.1611 (0.1839) [-0.938]	-0.3567 (0.2861) [-1.433+]
Race: Black-White	0.1313 (0.4223)	0.0893 (0.2616) [-0.068]	0.1346 (0.2425) [0.006]	0.4423 (0.3617) [0.483]	0.2998 (0.2906) [0.283]
Mexican-White	-0.2902 (0.4011)	-0.3116 (0.3285) [-0.034]	0.1352 (0.2967) [0.716]	0.2011 (0.3546) [0.796]	0.2631 (0.3468) [0.937]
NYC Status:	-0.3169+ (0.2195)	0.2199 (0.1832) [1.541+]	0.2478 (0.2098) [1.610+]	-0.0107 (0.2140) [0.879]	0.0209 (0.2312) [0.988]
Head: Mother-Father	-0.0423 (0.1869)	-0.4156* (0.1666) [-1.230]	0.0016 (0.1825) [0.146]	0.2890 (0.2466) [-0.735]	-0.1067 (0.2430) [0.205]
Other-Father	0.1219 (0.2330)	-1.2548** (0.4269) [-2.457**]	-0.3959 (0.3024) [-1.223]	0.1946 (0.3472) [0.163]	-0.0864 (0.4190) [-0.455]
Education of Head:	-0.0423+ (0.0310)	-0.0250 (0.0498) [0.254]	0.0391 (0.0415) [1.422+]	0.0697* (0.0339) [2.182*]	0.0793* (0.0425) [2.287*]

TABLE 19- ANALYSIS OF COHORT GROUPS FOR HIGH SCHOOL GRADUATION (CONT'D)

	High School Graduation				
	After Jan.1971	1-10 Months	11-20 Months	21-40 Months	40 Months Plus
Constant	1.3380	1.1203	0.4281	0.1919	0.0694
No. of Observations	27	28	30	32	25
R^2	0.207	0.473	0.287	0.316	0.230
Anova F-Ratio	0.710	2.56*	1.26	1.58	0.72
Anocova F-Ratios					
Intercepts	1.38				
Slopes	0.98				
Homogeneity	1.03				

\+ Significant at .10 level
* Significant at .05 level
** Significant at .01 level

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Youths with a variety of work experience, NYC and non-NYC, and youths with only private sector work experience probably possess qualities of aggressiveness and self-interest moreso than the pure NYC and no work groups. The reasons for this are: first, youths selected for private sector work are more likely to be chosen on the basis of expected performance since they are competing for scarce job assignments; although, some nepotism is no doubt present in placement.

On the other hand, NYC jobs are assigned according to (parents) income qualification. Often times, it is the parent or the school that provides the push which connects the youth with the NYC office and not qualities of individual drive.

The quality described is often associated with positive self-selection bias. And, if the analysis is correct it can be illustrated that the original control group possesses more positive self-selection bias compared with original NYC group.

Consider the following groups and numbers:

Group	Work Experience	Number
A	NYC Only	48
B	NYC and Non-NYC	55
C	Non-NYC Only	28
D	No Work	11

The two groups with positive self-selection bias are B and C those without A and B and the original control is C and D. Thus, the original control group possessed a higher proportion of positive self-selection bias because:

$$\frac{B}{A} > \frac{C}{D} \quad ; \quad \frac{55}{48} < \frac{28}{11}$$

and this places an underbias to the NYC group as a whole.

Similarly in the cohort investigation of post-high school educational participation the NYC coefficient does not follow any trend. Table 20 shows this; herein, the non-NYC coefficients are not included.

SUMMARY

This chapter has analyzed the educational performance of the sample with interest directed toward the role of NYC participation in increasing high school graduation probability and improving the post-high school educational propensity. The following summarizes the results found here.

(1) In the total sample NYC participation did not influence any aspect of educational performance.

(2) Non-NYC variables in the analysis of the total sample, presented in Table 13, generally behaved as expected. The probability differential between males and females indicated a dropout rate for males greater than expected.

(3) The commonality of equations estimated on the NYC and control groups for educational performance indicated no significant overall structural difference. Two individual coefficients did show a difference between the two equations --age and education-- of the head in the high school graduation equations.

(4) When the NYC coefficients were estimated on the sexes taken separately, it did not affect educational performance in either group.

TABLE 20- NYC COEFFICIENTS FOR COHORT ANALYSIS OF POST HIGH SCHOOL EDUCATIONAL PERFORMANCE

	After Jan.1971	1-10 Months	11-20 Months	21-40 Months	41 Months Plus
College Attendance:					
NYC Coefficient	-0.3936	-0.1527	0.2961+	0.0244	-0.1603
Std.Error	(0.3204)	(0.1863)	(0.1913)	(0.1511)	(0.2258)
Difference		[0.709]	[2.016*]	[1.230]	[0.701]
R^2	0.132	0.340	0.276	0.495	0.190
Anova F-Ratio	0.41	1.47	1.20	3.36**	0.57
Anocova F-Ratio					
Intercept	0.26				
Slope	0.77				
Homogeneity	0.70				
Vocational Attendance:					
NYC Coefficient	-0.4286+	-0.1211	-0.0077	-0.4512*	0.0066
Std.Error	(0.2574)	(0.2438)	(0.2344)	(0.2081)	(0.2361)
Difference		[0.800]	[1.088]	[-0.059]	[1.156]
R^2	0.440	0.202	0.217	0.353	0.197
Anova F-Ratio	2.13+	0.72	0.87	1.87	0.60
Anocova F-Ratio					
Intercept	0.70				
Slope	1.11				
Homogeneity	1.06				
Number of OBS	27	28	30	32	25

\+ Significant at .10 level
* Significant at .05 level
** Significant at .01 level

(5) NYC participation improved Black graduation rates but not Mexican-Americans or Whites.

(6) College attendance for Mexican-American NYC participants was below that of controls of the same ethnic group.

(7) School year participants with over twelve months of NYC experience did better than controls in completing high school. Summer participation in NYC did not improve graduation probability, thus this component was less successful compared with school year participants with over twelve months experience.

(8) The group with a combination of NYC and non-NYC work experience has a 26% higher graduation probability than those who do not work in high school.

(9) There is indication that the NYC youth in the sample do not possess the aggressive, self-interest qualities associated with positive self-selection bias. Indeed, the bias is more likely a lack of these qualities.

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CHAPTER 5

SUMMARY AND CONCLUSIONS

The main problem of this study is to determine the influence of NYC participation on selected earning capacity variables. Chapter 3 considered labor market performance by concentrating on the influence of NYC on post-high school earnings and unemployment. Chapter 4 investigated the educational aspects of earning capacity, in particular, the role of NYC in raising high-school graduation rates, college attendance and vocational training participation. This chapter summarizes the results of the statistical investigation, appraises the experimental design and offers some explanations and recommendations relating to the results.

SUMMARY OF STATISTICAL ANALYSIS

The following presents a summary of the statistical analysis of chapters three and four. This summary concentrates primarily on the influence of NYC and assumes variation in the performance factors associated with non-NYC variables is accounted for. Corresponding results of the previous investigation by Somers and Stromsdorfer at the University of Wisconsin are juxtaposed to those of the present study for comparison.

NYC In The Total Sample

In this study there were six estimates, one for each earning capacity variable, made using the total sample and

representing NYC participation as a single qualitative variable. These controlled estimates of NYC influence all indicated the same thing: NYC participation did not materially improve post-high school earning capacity. For such a test to come out significant, the NYC influence would have to be strong and widespread in the sample.

In the Wisconsin study, under similar statistical conditions, the NYC influence did significantly increase post-high school earnings. But NYC did not significantly reduce unemployment or improve high school graduation rates. Their estimates of post-high school educational efforts included only the high school graduates in their sample and found NYC to be a significant factor in improving college attendance.

By Sex

When the male subsample was taken separately in the present study the results were the same as the total sample; that is, NYC participation did not favorably influence any index of earning capacity. The NYC influence, of course, controlled for several other factors.

Correspondingly, the male subsample in the Wisconsin study behaved differently. Male NYC participation had a moderate improvement in post-high school earnings over male controls. But NYC participation, contrary to expectations, reduced high school graduation rates among males. The possibility of NYC encouraging labor force participation was more pronounced for males. According to the study, NYC improved the propensity of male high school graduates to attend vocational school.

The female subsample indicated no gains from NYC participation on any earning capacity variable, in this study. There was a lower propensity of female NYC participants attending vocational school than female controls.

Similarly, in the Somers and Stromsdorfer study, the female subsample alone did not show gains to NYC for post-high school earnings, unemployment, college participation or vocational training.

By Race

In this study, NYC participation improved high school graduation rates in the black subsample; i.e., where black participants are compared with black controls. But among blacks in Houston there was no corresponding gain to NYC participation for earnings, unemployment or post-high school educational efforts.

By comparison, the black subsample in the nationwide study done at Wisconsin, NYC participation provided significant gains in post-high school earnings, reduced unemployment and improved the high school graduation rate. But in their study, there was no corresponding gains to NYC participation for blacks in terms of greater attendance in college or vocational training.

In the present study NYC participation for Mexican-Americans taken separately, did not improve earning capacity according to any of its indexes. Actually, college attendance for Mexican-American NYC participants in Houston was lower than for controls of the same ethnic group.

The latter results are in opposition to the results of Somers and Stromsdorfer, where NYC participation significantly improved college attendance among Mexican-Americans. However, the two results may not be comparable because they estimated college attendance propensity only among high school graduates and their Mexican-American sub-population was more likely from less urbanized areas.

Further, in the Mexican-American subsample of the Wisconsin study, NYC participation led to lower high school graduation probability. No information was given for NYC influence on earnings and unemployment for Mexican-Americans.

Finally, the White sub-sample in the present study suffers from its small size, although it represents a proportionately large share of the white NYC population.

The nationwide sample did not have a problem with the number of Whites in their sample. Their estimates indicate that for Whites taken alone NYC participation improved post-high school earnings and college attendance. It did not improve high school graduation chances, vocational training or reduce unemployment for this racial subsample.

NYC Type and Duration

The part of the NYC group which participated in the school year segment of the program and had more than twelve months of NYC experience produced some contrasting results between the earning capacity variables. Participation in this group compared with controls yielded lower post-high

school earnings but a greater high school graduation probability, other factors held constant. The lower earnings might find an explanation in that the NYC participants with longer participation records have a greater proportion of females who would be expected to lower average post-high school earnings.

The Somers and Stromsdorfer study is not directly comparable to the procedures which gave the above results. Yet they did investigate the same variables. Their results confirm the lower earnings for participants with more than twelve months NYC experience. The results of the Wisconsin study also confirm that high school graduation probability improves with additional NYC experience.

Further, the Wisconsin study indicates that the participation school-year component of NYC positively influences post-high school earnings but the summer program yields no effect on earnings. Furthermore, school-year participation has some negative association with high school graduation but summer-only has no effect.

High School Work Composition

A separate analysis was made in the Houston study of the controlled influence of four groups based on the composition of their high school work; these groups include NYC work only, non-NYC work only, both NYC and non-NYC work and no high school work experience. The main results of this investigation are: (1) youths with a combination of work

experience and those with just non-NYC work experience in high school had improved chances of graduating from high school compared with those who did not work at all; (2) the two groups with some NYC experience had lower unemployment rates than the no-work group; and (3) these factors had no influence on post-high school earnings or education.

Separate calculations associated with high school graduation of these groups point out the possibility that the control group may possess a greater proportion of positive self-selection bias than the NYC group. But this is a judgment not a tested statistical conclusion.

Cohort Analysis

The sample was grouped into cohorts based on the duration of time since leaving high school. The influence of NYC participation within these groups, other factors held constant, was evident only for post-high school earnings and graduation probability. The following list indicates the direction of the influence of NYC on these two variables; for other earning capacity variables, NYC had no influence.

No.	Cohort	Earnings	HS Graduation
1	Left HS after Jan 1971	Negative	Negative
2	Left HS 1-10 Mo Before Jan 1971	Positive	None
3	Left HS 11-20 Mo Before	None	None
4	Left HS 21-40 Mo. Before	Negative	None
5	Left HS 40 Mo. Plus Before Jan 1971	None	None

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With the length of the current period since January averaging about 17 months; the second cohort had approximately 17 to 27 months in the labor force since high school. A crude generalization of the trend shown here may give NYC responsibility for a temporary income gain for a short period of time after high school. This is a very tenuous conclusion on shaky statistical evidence, yet it is the only obvious trend.

VALIDITY OF THE EXPERIMENTAL DESIGN

The results described above or the lack of them are reliable only to the degree that false conclusions can be prevented by the experimental design. Thus it is necessary to weigh possible incursions which would cause qualifications to be added to statements about the influence of NYC participation on earning capacity. These incursions may arise from one or more of the following sources: (1) the purity of the control group design, (2) the effective sample size, (3) the model specification, (4) the reasonableness of the non-NYC relationships, and (5) the difference between correlation and causation in statistical analysis. It is impossible to attach quantitative importance to these factors and amend the above results. But discussion of their possible importance is a necessary addendum to the results themselves.

The purity of the control group design has two aspects. The first, which is more easily dealt with,

is the comparability of the NYC group and the control group on the basis of factors which have been measured. The raw comparisons of Chapter 2 indicated that, with the exception of racial proportions, the two groups were within similar statistical populations when each characteristic was taken separately. But more important the similarity of the two groups was appraised on the basis of several characteristics at the same time through the use of analysis of covariance between the NYC and the control groups. The Anocova F-ratios for homogeneity for the six earning capacity variables are summarized below. In each case the observed F-ratio was less than the critical value. Thus the hypothesis of commonality cannot be rejected, and the two groups assumed to be from the same statistical population.

No.	Dependent Variable	Anocova F-Ratio
1.	Total Post-High School Earnings	0.50
2	Average Monthly Post-High School Earnings	0.79
3	Percent of Time Unemployed	0.57
4	Probability of High School	1.29
5	Probability of College Attendance	0.47
6	Probability of Vocational Training	1.11

In these comparisons several individual coefficients were found to be significantly different between equations estimated on the NYC group and corresponding equations estimated on the control group. No detectable pattern or

reason for these differences could be made with the method of choosing controls or the research design.

The other way of comparing the NYC group with the control group is on the basis of variables which were not measured in the study but which have some liklihood of being present. Even though the selection of sibling controls gives some assurance that the two groups are from the same socio-economic population, there may be some form of systematic bias which would render the two groups different. Of the three mentioned in Chapter 2; small family bias, externality bias and self-selection bias, only the last is felt to be important. However having no measures to go by it is impossible to obtain an estimate of their individual or total influence on the performance criteria.

Somers and Stromsdorfer attempted to measure self-selection bias with a discriminant function. Their estimates were often inconsistent with respect to the direction of the bias in their sample and as a result probably reflected an inaccurate picture of the true bias.

In the present study the analysis of the influence of high school work composition has led to the conviction that the most likely direction of self selection bias is to give controls, as a group, an advantage not enjoyed by the NYC group. While many individual NYC participants no doubt possess the aggressive self-interest qualities associated with positive self-selection bias, the proportion is thought to be lower in this group than in the control group.

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Sample size is important, of course, because the contemplation of repeating the experiment using identical technique would be expected to produce different responses. But selecting a level of statistical significance gives better than even odds at making conclusions based on the sample.

More important, in this study, however, is the effective sample size in the wake of a low response rate. The conclusions may be in error, although not because the NYC and control group are differently affected, because the individuals were found and interviewed are not the same as the population in general. Thus absence of the mobile members of the NYC and control population or the absence of a number of males who were in the military may have altered the representativeness of the sample that was interviewed.

The model representing the functional relation between the several variables and earning capacity may have been misspecified. A different set of variables or a different form of the function could have led to better estimates of the regression coefficients and thus more reliable conclusions with respect to NYC. The low R^2 and spotty Anova F-ratios attest to the fact that often not much of the total variation in earning capacity is adequately explained and a model misspecification may be the culprit. On the other hand, the state of manpower science at the present time does not provide much basis for the selection of a better model predicting earning capacity.

Another factor to be considered in appraising the reliability of the results is the reasonableness of the non-NYC relationships. Thus, there is some a priori basis for the selection of variables and their expected relationship to earning capacity. If these other factors perform as expected then confidence in the focus of the analysis, the NYC influence, is increased.

Since the results presented in this study depend largely on multiple regression methods, caution must be expressed about the results indicating correlation and not causation. The problem of this study has been to find and analyze the most prominant statistical associations in the context of an eleborate methodology designed to give some insights into the causal role of NYC. But causality in this context cannot be based on one or two studies. Such an objective must be the product of cumulative research efforts.

INTERPRETATIONS AND RECOMMENDATIONS

In light of the evidence presented above and without knowing how much weight to attach to the design imperfections the task is to summarize the key positions with regard to the post-program influence of participation in NYC. These positions are described in the following seven statements.

Interpretations

1. NYC Participation Does Not Improve the High School Graduation Rate. This is a central issue in the notion of the NYC program since if a high school education is the main

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benefit of NYC and improved post-high school earnings are the result of the education, then NYC can be held to be an important contributor to a participant's earning capacity. Yet the first link in the argument cannot be supported with the evidence with the possible exception of the Black subgroup. In the Houston study for the total sample, for Whites, Mexican-Americans, males and females each taken as separate groups NYC did not improve graduation rates. Furthermore, these results do not contradict the Wisconsin study in this regard. Indeed that study indicated NYC actually reduced graduation chances for males, Whites and Mexican-Americans.

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2. The NYC Influence on Immediate Post-High School Income is Questionable. The evidence of this study and the Wisconsin study are not the same with regard to the NYC influence on post-high school earnings. The present study showed no income gain to NYC participation while the other study indicated some significant gains. But an income gain if present is not operating through greater high school graduation rates and thus must be felt through some other means. These other means may include as Somers and Stromsdorfer indicate, increased labor force participation of participants. In other words NYC youths are learning the nature of the basic exchange agreement in the market economy and are responding to the income rewards regardless of the attainment of the high school diploma. However, advantages of this sort are not expected to be lasting since

they are not built on a solid base of skill embodiment or career drive. Thus it is possible that the hint of a temporary income gain to NYC participation from the cohort analysis is the wave that Somers and Stromsdorfer measured in their study. And under that presumption the slightly longer view afforded by the present study would find that initial income gain to NYC participation washed out.

3. NYC Influence on College Attendance and Long-Run Income Prospects Are Questionable. This study did not find NYC participation to be an influence on college attendance and thus there was not that possible link to improved long-run earning prospects for NYC participation. While Somers and Stromsdorfer did show improved college attendance associated with NYC, their evidence is less convincing for the fact that they only measured the differential among high school graduates. This not only precludes college participation through high school equivalency training but since for many groups high school graduation rate was lower for NYC participants, they are excluding a greater proportion of probable noncollege students from the comparison. What is in question here is how much of a role NYC plays in motivating career acquisition through college on the part of its participants. The evidence is not conclusive.

4. NYC Participation Does Not Stimulate Post-High School Vocational Training. The present study does not indicate an influence of NYC participation toward increasing

post-high school vocational development. Actually for the female subsample NYC participation was associated with reduced vocational attendance. In the Wisconsin study there was no significant influence of NYC on post-high school training in the total sample. In the male subsample there was some improvement, however, in this matter.

5. NYC Participation Benefits Blacks More than Other Ethnic Groups. It was indicated in the present study that high school graduation rates increased with NYC participation for Blacks considered separately. This confirmed a similar conclusion from the Wisconsin study. They also reported higher earnings and lower unemployment for Blacks as a result of NYC participation. The scope of these improvements were not matched by Whites nor Mexican-Americans.

6. The school year segment of the NYC Program contributes more to high school graduation than the summer-only segment. The results of this study indicate school year participants had a better graduation rate than summer-only participants, especially if they stayed with the program for more than twelve months. The evidence for this position is not confirmed in the Wisconsin study.

7. Income gains to NYC participation does not increase with the length of participation. The trend was confirmed in this study and the Wisconsin study that those with greater levels of NYC experience often have lower post-high school earnings. It is believed this result is produced by a greater proportion of females in the high experience group rather than something inherent in the program.

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Recommendations

In light of the above statements of NYC participation the following recommendations are appropriate.

1. Additional research is required on the motive for dropping out of high school, with particular interest in Whites and Mexican-Americans since they do not seem to be influenced in this decision by NYC.

2. Further study on the permanency of possible income gains associated with NYC participation as well as its influence on education efforts which have long-run income consequences.

3. An attempt should be made to direct non-college bound high school youths participating in NYC toward additional vocational training. This is especially applicable for youths who stay with the program for a long time and are not improving their future earnability.

4. Attempt to aim the program at youths with a potential for low earning capacity. This may mean giving more weight to potential dropouts than to family income in enrollment criteria.

5. Further study of individual elements of NYC participation which may reveal benefits rather than a single qualitative variable representing participation or non-participation.

To a great extent the present study has looked to find a post-high school influence of NYC and has found none. To some this may be taken as reason for cutting out this program. But, if the original goals and intent of the Economic Opportunity Act are still acceptable and then the intent of the NYC

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Program was to have a lasting impact on the participants then it is hoped that in the results of this study there can be found possibilities for a renewed direction toward the original goal.

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APPENDIX A

NEIGHBORHOOD YOUTH CORPS QUESTIONNAIRE

UNIVERSITY OF HOUSTON
ECONOMICS DEPARTMENT

HELLO, MY NAME IS _____. I AM EMPLOYED BY THE ECONOMICS DEPARTMENT AT THE UNIVERSITY OF HOUSTON. THE UNIVERSITY OF HOUSTON WITH THE COOPERATION OF YOUR LOCAL NEIGHBORHOOD YOUTH CORPS IS CONDUCTING A STUDY OF THE EMPLOYMENT OF YOUNG PEOPLE WHO HAVE PARTICIPATED IN THE NEIGHBORHOOD YOUTH CORPS AND OTHER MEMBERS OF THEIR FAMILIES. YOU WERE SELECTED TO BE A MEMBER OF THIS STUDY. WITH YOUR PERMISSION I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT YOUR HIGH SCHOOL EXPERIENCE AND YOUR CURRENT EMPLOYMENT. YOU ARE ENTITLED TO A $3 PAYMENT IF YOU ARE ELIGIBLE AND IF THE INTERVIEW ID COMPLETED.

BEFORE WE BEGIN, I WOULD LIKE TO ASSURE YOU THAT YOUR ANSWERS TO ANY OF THESE QUESTIONS ARE STRICTLY CONFIDENTIAL: NO ONE'S NAME OR ADDRESS WILL BE REVEALED IN THE STUDY.

- - - -

A. HIGH SCHOOL STATUS

☐☐☐☐☐☐☐☐☐☐
01 (card 1) 10

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1. WHAT MONTH AND YEAR DID YOU START JUNIOR HIGH SCHOOL - THAT IS THE 7TH GRADE?
Record directly on the time line
Place an X in the appropriate month and year in the row marked EDUCATION.

2. DID YOU GRADUATE FROM HIGH SCHOOL?
(Do not count Military or other equivalency exams as graduation)

(a) ____(1) YES, SKIP TO 4
____(2) NO ☐ 11

3. ARE YOU STILL ATTENDING HIGH SCHOOL?

(c) ____(1)YES, SKIP TO 5
(b) ____(2)NO ☐ 12

NOTE: Read (a) for highschool graduates, (b) for dropouts and (c) for those still in high school.

4. (a) WHAT WAS THE MONTH AND YEAR THAT YOU GRADUATED?

(b) WHAT WAS THE MONTH AND YEAR THAT YOU LAST DROPPED OUT OF HIGH SCHOOL?

Record directly on the time line
Place an X in the row marked EDUCATION in the appropriate month and year.

5. (a) WHAT HIGH SCHOOL DID YOU GRADUATE FROM?

(b) WHAT WAS THE NAME OF THE HIGH SCHOOL YOU LAST ATTENDED?

(c) WHAT HIGH SCHOOL ARE YOU ATTENDING NOW?

_____
(Name)

13 14 15
☐ ☐ ☐

6. WHAT SCHOOL DISTRICT IS - IN?

_____
(School District)

☐ ☐
16 17

7. (a) WHILE YOU WERE (b) IN HIGH SCHOOL WERE YOU EVER IN A PROGRAM FOR BUSINESS EDUCATION, HOME - MAKING, DISTRIBUTIVE EDUCATION, INDUSTRIAL OR VOCATIONAL EDUCATION, DRIVER TRAINING OR ROTC?

_____ YES
___(01)AGRICULTURE
___(02)AUTO MECHANICS
___(03)AUTO PAINT AND BODY SHOP
___(04)BUSINESS EDUCATION
___(05)COSMETOLOGY
___(06)DISTRIBUTIVE EDUCATION
___(07)DRAFTING
___(08)DRIVER EDUCATION
___(09)DRY CLEANING
___(10)HANDICRAFTS
___(11)HOMEMAKING
___(12)MACHINE SHOP
___(13)METAL SHOP
___(14)PHOTOGRAPHY
___(15)PRINTING
___(16)RADIO AND TV
___(17)REFRIGERATION AND AIR CONDITIONING
___(18)ROTC
___(19)TRADE COOKING AND BAKING
___(20)TRADE DRESSMAKING
___(21)VOCATIONAL NURSING
___(22)WELDING
___(23)WOODSHOP
___(24)OTHER: SPECIFY - _____

____(99)NO

☐☐ ☐☐
18 19

☐☐ ☐☐
20 21

☐☐ ☐☐
22 23

☐☐ ☐☐
24 25

8. (a) DID YOU AT ANY TIME DROP OUT OF SCHOOL FOR A WHILE BEFORE YOU FINALLY GRADUATED?
(b)DID YOU EVER DROP OUT OF HIGH SCHOOL AND RETURN BEFORE YOU FINALLY LEFT (IN (Date))?
(c)HAVE YOU EVER DROPPED OUT OF HIGH SCHOOL FOR A WHILE?
____(1) YES
____(2) NO, SKIP TO 12

☐ 26

9. HOW MANY TIMES?

_____ ☐
(Number) 27

10. WHAT MONTH AND YEAR DID YOU DROP OUT OF SCHOOL THE _____ TIME?
(1st,2nd,etc)

11. WHAT MONTH AND YEAR DID YOU RETURN TO SCHOOL?

Record directly on the time line Place and arrow → in the high school row, i.e. the one marked EDUCATION up to, but not including the month of dropout. Place a line ----- when high school resumed starting in the month mentioned for return to school. Repeat this for each of the N times mentioned in Question 9.

NOW: Treating each of the dropout periods as a gap, go to the GAP ALGORITHM and find out what labor force activity took place Return here and continue with Question 12.

B. NYC PARTICIPATION

12. WHEN YOU WERE (c) IN HIGH SCHOOL HAD YOU EVER HEARD OF THE NEIGHBORHOOD YOUTH CORPS PROGRAM?

____(1) YES
____(2) NO, SKIP TO 18 ☐ 28

13. WHILE YOU WERE (c) IN HIGH SCHOOL DID YOU EVER APPLY FOR ADMISSION TO A NEIGHBORHOOD YOUTH CORPS PROGRAM?

____(1) YES
____(2) NO, SKIP TO 18 ☐ 29

14. WHILE YOU WERE (c) IN HIGH SCHOOL WERE YOU EVER ENROLLED IN A NEIGHBORHOOD YOUTH CORPS PROGRAM?

____(1) YES - LEELAND 5.NO__,
____(2) YES - CRESCENT SKIP TO
____(3) YES - HCDE 18
____(4) YES - OTHER _____ ☐ 30

15. WHILE YOU WERE (c) IN HIGH SCHOOL, IN WHAT WAYS WAS THE PROGRAM OF VALUE TO YOU?

Rank the five most important items - most important, second third, fourth, and fifth. This is an opinion question. There are no correct answers, (Provi respondent with a list).

____(01) MONEY FOR FAMILY
____(02)MONEY FOR CLOTHES
____(03)MONEY FOR EXPENSES
____(04)MONEY FOR CAR
____(05)MONEY FOR COLLEGE
____(06)BETTER GRADES
____(07)BETTER CITIZENSHIP
____(08)BETTER WORK HABITS
____(09)STAY IN SCHOOL
____(10)WORK EXPERIENCE
____(11)PRIDE IN ACCOMPLISHMEN
____(12)WORK WITH PEOPLE
____(13)CONSTRUCTIVE USE OF TI
____(14)LEARN EMPLOYMENT SKILL
____(15)MORE PUNCTUAL
____(16)MORE RESPONSIBLE
____(17)MORE SELF-CONFIDENT
____(18)UNDERSTAND SCHOOL OPER TION
____(19)OTHER:

_____

_____

1st ☐☐ 31 32
2nd ☐☐ 33 34
3rd ☐☐ 35 36
4th ☐☐ 37 38
5th ☐☐ 39 40

If respondent is still in high scho skip to Question 17, otherwise continue with Question 16.

16. LOOKING BACK, WHAT VALUE HAS THE NYC EXPERIENCE BEEN TO YOU SINCE YOU LEFT HIGH SCHOOL?

Rank the three most important items most important, second and third, This is an opinion question, there are no correct answers. (Provide respondent with a list).

_____(01) HELPED ME GET A HIGH SCHOOL EDUCATION.
_____(02) HELPED ME DEVELOP A JOB SKILL.
_____(03) KNOWLEDGE OF WHERE TO LOOK FOR WORK
_____(04) HELPED ME LEARN BETTER WORK HABITS
_____(05) KNOWLEDGE OF WHAT KIND OF JOB TO AVOID
_____(06) HELPED ME GET TO A BETTER PAYING JOB.
_____(07) LED ME TO MORE INTERESTING JOBS.
_____(08) BROUGHT ME IN CONTACT WITH PEOPLE WHO HAVE HELPED ME.
_____(09) PUT ME IN A BETTER POSITION TO FURTHER MY EDUCATION
_____(10) HELPED MAKE ME A MORE RESPONSIBLE PERSON.
_____(11) HELPED ME LEARN HOW TO USE MY TIME BETTER.
_____(12) HELPED ME DEVELOP SELF CONFIDENCE.
_____(13) WAS OF NO PARTICULAR VALUE TO ME AFTER HIGH SCHOOL.
_____(14) OTHER

_____

1st ☐ 41 ☐ 42

2nd ☐ 43 ☐ 44

3rd ☐ 45 ☐ 46

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17. HOW MANY DIFFERENT JOBS DID YOU HAVE WITH THE NEIGHBORHOOD YOUTH CORPS?

_____ ☐ 47
(Number)

NOW: Go to the JOB ALGORITHM and get the details on these jobs. All such jobs are classified M. Return here and continue with Question 18.

C. OTHER HIGH SCHOOL EMPLOYMENT

NOW: Extend the high school line in the row marked EDUCATION on the time line from the initial X to the ending X omitting dropout periods and summers (i.e. June, July and August).

18. DURING THE SUMMER VACATION PERIODS WHILE YOU WERE IN HIGH SCHOOL DID YOU EVER ATTEND SUMMER SCHOOL?

_____ (1) YES
_____ (2) NO, SKIP TO 20 ☐ 48

19. WHICH SUMMERS WERE THEY?

Record directly on the time line by extending the high school line in the row marked EDUCATION through the summers indicated.

20. DURING THE (REMAINING) SUMMER VACATION PERIODS WHILE YOU WERE IN HIGH SCHOOL, DID YOU EVER TAKE A VACATION OR DO NOTHING IN PARTICULAR?

_____ (1) YES
_____ (2) NO, SKIP TO 22 ☐ 49

21. WHICH SUMMERS WERE THEY?

Record directly on the time line by placing a two headed arrow (↔) in the row marked HILF for the summers indicated.

22. DURING THE (REMAINING) SUMMER VACATION PERIODS WHILE YOU WERE IN HIGH SCHOOL DID YOU EVER WORK? (Exclusive of NYC jobs indicated).

_____(1) YES
_____(2) NO, SKIP TO 24 ☐ 50

COMMENTS:

23. WHICH SUMMERS WERE THEY?

NOW: Go to the JOB ALGORITHM for the details of these jobs. Return here and continue with Question 24.

24. WHILE YOU WERE IN HIGH SCHOOL DID YOU EVER HAVE ANY (OTHER) JOB (NOT ALREADY RECORDED OR IN THE NYC PROGRAM) LASTING ONE MONTH OR MORE? Do not count babysitting or family employment unless wages were paid.

_____(1) YES
_____(2) NO, SKIP TO 25b ☐ 51

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25.(A) HOW MANY SUCH JOBS DID YOU HAVE?

_____ ☐ 52

Go to JOB ALGORITHM and record the details of these jobs. Return to this spot and the next instruction.

25. (B) (Follow Instructions): Survey the entire high school period and look for gaps. A GAP is when the education line is broken - i.e., for summer or dropout periods and there is no entry in the other rows: EMPLOYMENT, UNEMPLOYMENT, or MILF. Go to GAP ALGORITHM and fill in these gaps. Return to Question 26.

D. CURRENT LABOR FORCE STATUS

26. WHAT WERE YOU DOING MOST OF LAST WEEK - WORKING, GOING TO SCHOOL OR SOMETHING ELSE?

___(1)WK-WORKING, SKIP TO 27(E) →
___(2)J -WITH A JOB BUT NOT AT WORK
___(3)LK-LOOKING FOR WORK
___(4)S -GOING TO SCHOOL
___(5)U-UNABLE TO WORK, SKIP TO 30a
___(6)OT-OTHER-SPECIFY

_____ ☐ 53

27. (C) DO YOU USUALLY WORK 35 HOURS OR MORE A WEEK AT THIS JOB?

___(1) YES - (D) WHAT IS THE REASON YOU WORKED LESS THAN 35 HOURS LAST WEEK?
___(2) NO - (E) WHAT IS THE REASON YOU USUALLY WORK LESS THAN 35 HOURS A WEEK?

(Mark appropriate reason) ☐ 54

___(01)SLACK WORK
___(02)MATERIAL SHORTAGE
___(03)PLANT OR MACHINE REPAIR
___(04)NEW JOB STARTED DURING WEEK
___(05)JOB TERMINATED DURING WEEK
___(06)COULD FIND ONLY PART-TIME WORK
___(07)LABOR DISPUTE
___(08)DID NOT WANT FULL-TIME WORK
___(09)FULL-TIME WORK WEEK UNDER 35 HOURS
___(10) ATTENDS SCHOOL
___(11)HOLIDAY (LEGAL OR RELIGIOUS)
___(12)BAD WEATHER
___(13)OWN ILLNESS
___(14)ON VACATION
___(15)TOO BUSY WITH HOUSEWORK, PERSONAL BUSINESS, ETC.
___(16)OTHER - SPECIFY

_____ ☐☐ 55 56

If entry in 27(D) or 27 (E), skip to 31.

27. (A) DID YOU DO ANY WORK AT ALL LAST WEEK, NOT COUNTING WORK AROUND THE HOUSE?

___(1)YES
___(2)NO, SKIP TO 28a→ ☐ 57

27. (B) HOW MANY HOURS DID YOU WORK LAST WEEK AT ALL JOBS?

_____ ☐☐ 58 59

RESPONDENT WORKED
___(1) 49 OR MORE HOURS, SKIP TO 31
___(2) 1-34 HOURS, ASK 27c-e
___(3) 35-48 HOURS, ASK 27f-h

☐ 60

27. (F) DID YOU LOSE ANY TIME OR TAKE ANY TIME OFF FROM WORK LAST WEEK FOR ANY REASON SUCH AS ILLNESS, HOLIDAY OR SLACK WORK?

___(1) YES - HOW MANY HOURS DID YOU TAKE OFF?

_____ (Hours)

___(2) NO

☐☐☐ 61 62 63

NOTE: Correct item 27b if lost time is not already deducted. If item 27b is reduced below 35 hours ask 27c-e, otherwise skip to 31.

27. (G) DID YOU WORK ANY OVERTIME OR EXTRA HOURS LAST WEEK?

___(1) YES -HOW MANY EXTRA HOURS DID YOU WORK?

_____ (Hours)

___(2) NO ☐☐☐ 64 65 66

NOTE: Correct item 27b, if extra hours not already included and skip to 31.

27. (H) DID YOU WORK AT MORE THAN ONE JOB OR FOR MORE THAN ONE EMPLOYER LAST WEEK?

___(1) YES
___(2) NO

NOTE: Find out whether hours on extra job were included in 27b, if not correct. Skip to 31a.

☐ 67

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D. CURRENT LABOR FORCE STATUS

26. WHAT WERE YOU DOING MOST OF LAST WEEK - WORKING, GOING TO SCHOOL OR SOMETHING ELSE?

___(1)UK-WORKING, SKIP TO 27(B) →
___(2)J -WITH A JOB BUT NOT AT WORK
___(3)LK-LOOKING FOR WORK
___(4)S -GOING TO SCHOOL
___(5)U-UNABLE TO WORK, SKIP TO 30a
___(6)OT-OTHER-SPECIFY

_____ ☐ 53

27. (C) DO YOU USUALLY WORK 35 HOURS OR MORE A WEEK AT THIS JOB?

___(1) YES - (D) WHAT IS THE REASON YOU WORKED LESS THAN 35 HOURS LAST WEEK?
___(2) NO - (E) WHAT IS THE REASON YOU USUALLY WORK LESS THAN 35 HOURS A WEEK?

(Mark appropriate reason) ☐ 54

___(01)SLACK WORK
___(02)MATERIAL SHORTAGE
___(03)PLANT OR MACHINE REPAIR
___(04)NEW JOB STARTED DURING WEEK
___(05)JOB TERMINATED DURING WEEK
___(06)COULD FIND ONLY PART-TIME WORK
___(07)LABOR DISPUTE
___(08)DID NOT WANT FULL-TIME WORK
___(09)FULL-TIME WORK WEEK UNDER 35 HOURS
___(10) ATTENDS SCHOOL
___(11)HOLIDAY (LEGAL OR RELIGIOUS)
___(12)BAD WEATHER
___(13)OWN ILLNESS
___(14)ON VACATION
___(15)TOO BUSY WITH HOUSEWORK, PERSONAL BUSINESS, ETC.
___(16)OTHER - SPECIFY

_____ ☐☐ 55 56

If entry in 27(D) or 27 (E), skip to 31.

27. (A) DID YOU DO ANY WORK AT ALL LAST WEEK, NOT COUNTING WORK AROUND THE HOUSE?

___(1)YES
___(2)NO, SKIP TO 28a→ ☐ 57

27. (B) HOW MANY HOURS DID YOU WORK LAST WEEK AT ALL JOBS?

_____ ☐☐ 58 59

RESPONDENT WORKED
___(1) 49 OR MORE HOURS, SKIP TO 31
___(2) 1-34 HOURS, ASK 27c-e
___(3) 35-48 HOURS, ASK 27f-h

☐ 60

27. (F) DID YOU LOSE ANY TIME OR TAKE ANY TIME OFF FROM WORK LAST WEEK FOR ANY REASON SUCH AS ILLNESS, HOLIDAY OR SLACK WORK?

___(1) YES - HOW MANY HOURS DID YOU TAKE OFF?

_____ (Hours)

___(2) NO

☐☐☐ 61 62 63

NOTE: Correct item 27b if lost time is not already deducted. If item 27 is reduced below 35 hours ask 27c-e otherwise skip to 31.

27. (C) DID YOU WORK ANY OVERTIME OR EXTRA HOURS LAST WEEK?

___(1) YES -HOW MANY EXTRA HOURS DID YOU WORK?

_____ (Hours)

___(2) NO ☐☐ 64 65

NOTE: Correct item 27b, if extra hours not already included and skip to 31.

27. (H) DID YOU WORK AT MORE THAN ONE JOB OR FOR MORE THAN ONE EMPLOYER LAST WEEK?

___(1) YES
___(2) NO

NOTE: Find out whether hours on extra job were included in 27b, if not correct. Skip to 31a.

☐ 67

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(If "J" in 26, skip to 28b)

28. (A) EVEN THOUGH YOU DID NOT WORK LAST WEEK DO YOU HAVE A JOB (OR BUSINESS)?

___(1) YES
___(2) NO, SKIP TO 29a 68

28. (B) WHY WERE YOU ABSENT FROM WORK LAST WEEK?

___(1) OWN ILLNESS
___(2) ON VACATION
___(3) BAD WEATHER
___(4) LABOR DISPUTE
___(5) NEW JOB TO BEGIN WITHIN 30 DAYS - ASK 29c (2)
___(6) TEMPORARY LAYOFF (LESS THAN 30 DAYS)
___(7) INDEFINITE LAYOFF (MORE THAN 30 DAYS) OR NO DEFINITE RECALL DATE) } ASK 29c (3)
___(8) SCHOOL INTERFERED
___(9) OTHER - SPECIFY

_____ 69

28. (C) ARE YOU GETTING WAGES OR SALARY FOR ANY TIME OFF LAST WEEK?

___(1) YES
___(2) NO
___(3) SELF EMPLOYED 70

NOW: If respondent is LAYED-OFF or with NEW JOB and answered 29c (2) or (3) he is currently unemployed. Record on time line in row marked UNEMPLOYED for the months indicated in 29c, a two-headed arrow (↔). SKIP TO 31 and find out about job held last week.

(If "L" in 26, skip to 29b)

29. (A) HAVE YOU BEEN LOOKING FOR WORK DURING THE PAST 4 WEEKS?

___(1) YES
___(2) NO, SKIP TO 30a 71

29. (B) WHAT HAVE YOU BEEN DOING IN THE PAST 4 WEEKS TO FIND WORK? (Mark all methods used - do nor read the list)

___(1) CHECKED WITH SCHOOL EMPLOYMENT SERVICE (OR COUNSELOR)
___(2) CHECKED WITH PUBLIC EMPLOYMENT AGENCY
___(3) CHECKED WITH PRIVATE EMPLOYMENT AGENCY
___(4) CHECKED DIRECTLY WITH EMPLOYER
___(5) PLACED OR ANSWERED ADS
___(6) CHECKED WITH FRIENDS OR RELATIVES
___(7) OTHER - SPECIFY (E.G., NDTA, UNION, LETTER, ETC)

_____

___(8) NOTHING, SKIP TO 30a.

72 73 74 75

29. (C) (1) HOW MANY WEEKS HAVE YOU BEEN LOOKING FOR WORK?

(2) HOW MANY WEEKS AGO DID YOU START LOOKING FOR A JOB?

(3) HOW MANY WEEKS AGO WERE YOU LAID OFF?

} RETURN TO 29c

A=_____ 76 77
(Number of weeks)

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29. (D) HAVE YOU BEEN LOOKING FOR FULL- OR PART-TIME WORK?

____(1) FULL-TIME
____(2) PART-TIME ☐ 78

29. (E) IS THERE ANY REASON WHY YOU COULD NOT TAKE A JOB LAST WEEK?

____(1) NO ☐ skip
YES 79 80
____(2) TEMPORARY ILLNESS
____(3) NEEDED AT HOME
____(4) SCHOOL ALSO
____(5) OTHER-SPECIFY ASK
↓
_____ (reason)

HOW MANY WEEKS HAS KEPT YOU FROM TAKING A JOB?
B = _____
(Number of weeks)

☐☐☐☐☐☐☐☐☐☐☐☐
01 (Card 2) 10 11 12

NOW: If respondent answers 29e NO or TEMPORARY ILLNESS he is unemployed In this case place a two headed arrow (↔) in row marked UNEMPLOYED for the time period indicated in 29c and ending in the current month.

If respondent answers 29e something else, record all B time as NILF: i.e., a two headed arrow (↔) in row marked NILF for time indicated ending with the current month. If A > B then record the difference A-B in row marked UNEMPLOYED ending where B time starts.

30. (A) WHEN DID YOU LAST WORK AT REGULAR FULL- OR PART-TIME JOB OR BUSINESS?

____(1) RESPONDENT IS STILL IN HIGH SCHOOL - IF JOB INDICATED NOT RECORDED GO TO JOB ALGORITHM FO DETAILS - RETURN TO 30

____(2) BEFORE HIGH SCHOOL EXI DATE OR NEVER - IF JOB INDICATED NOT RECORDED GO TO JOB ALGORITHM FO DETAILS. ASK 30b.

____(3) AFTER HIGH SCHOOL EXIT DATE BUT PRIOR TO JAN 1971

____(4) AFTER HIGH SCHOOL EXIT DATE BUT AFTER JAN 1, 1971 - GO TO JOB ALGOR ITHM FOR DETAILS OF LA JOB. RETURN TO 30b.

☐ 13

30. (B) WHY HAVEN'T YOU WORKED SIN (Date) ?

____(1) FAMILY RESPONSIBILITIE
____(2) ILLNESS OR DISABILITY
____(3) FULL-TIME STUDENT
____(4) IN JAIL
____(5) DIDN'T WANT TO
____(6) OTHER - SPECIFY ☐ 14
_____

NOW: Record unassigned months of 1971-2 as NILF with a two headed arrow in that row.

30. (C) (Follow instructions)
(1) If any months from Jan 1, 1971 to present are unallocated to education or some labor force status - go to the GAP ALGORITHM and fill in the details. Return to Question 32.

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30. (C) (Follow instructions)
(2) If any education is indicated in 26, 29c, or 30b go to EDUCATION ALGORITHM for details. Return to 32.

31. (A) FOR WHOM DO YOU WORK? (NAME OF COMPANY, ORGANIZATION, OR OTHER EMPLOYER)

_____

_____

31. (B) WHERE IS ------ LOCATED?

_____

_____

31. (C) ARE YOU -

____(1) P. AN EMPLOYEE OF A PRIVATE COMPANY, BUSINESS OR INDIVIDUAL FOR WAGES, SALARY OR COMMISSION?

____(2) G. A GOVERNMENT EMPLOYEE (FEDERAL, STATE, COUNTY, OR LOCAL)?

____(3) Ø. SELF EMPLOYED IN OWN BUSINESS, PROFESSIONAL PRACTICE OR FARM?
IS THIS BUSINESS INCORPORATED?
____(1) YES ☐ 15
____(2) NO

____(4) WP. WORKING WITHOUT PAY IN FAMILY BUSINESS OR FARM?

☐ 16

NOW: Go to JOB ALGORITHM for details of this job. Return to 31d.

31. (D) (Follow instructions)
(1) IF ANY MONTHS FROM JAN 1, 1971 TO PRESENT ARE UNALLOCATED TO EDUCATION OR SOME LABOR FORCE STATUS - GO TO THE GAP ALGORITHM AND FILL IN THE DETAILS. RETURN TO QUESTION 32.

(2) IF ANY EDUCATION HAS BEEN INDICATED IN 26, OR ELSEWHERE GO TO THE EDUCATION ALGORITHM FOR DETAILS, RETURN TO 31d (2).

E. EDUCATION AND TRAINING

32. HAVE YOU EVER SERVED IN THE U.S. MILITARY?

____(1) YES

____(2) NO, SKIP TO 36 ☐ 17

33. WHAT MONTH AND YEAR DID YOU ENTER AND WHAT MONTH AND YEAR WERE YOU DISCHARGED?

ENTER _____

LEAVE _____

(If still in enter 9999)

Enter → ☐☐☐☐ 18 19 20 21

Leave → ☐☐☐☐ 22 23 24 25

34. WHAT KIND OF JOB DID YOU HAVE IN THE MILITARY?

_____

☐☐☐ 26 27 28

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35. DID YOU EVER RECEIVE ANY FORMAL TRAINING IN THE MILITARY WHICH COULD BE USEFUL TO YOU IN CIVILIAN LIFE?

____(01) YES, GO TO EDUCATION A ALGORITHM FOR DETAILS OF ALL MILITARY TRAINING WITH USABLE SKILLS. RETURN TO 36.

____(02) NO

29

36. HAVE YOU HAD ANY ADDITIONAL EDUCATION SINCE YOU LEFT HIGH SCHOOL - SUCH AS BASIC EDUCATION, HIGH SCHOOL LEVEL COURSES OR COLLEGE?

____(1) NO

YES: (MARK ALL MENTIONED)

____(2) BASIC EDUCATION

____(3) HIGH SCHOOL LEVEL - NO CERTIFICATION

____(4) HIGH SCHOOL LEVEL - GRADUATE EQUIVALENCY

____(5) COLLEGE OR JR. COLLEGE

____(6) OTHER - SPECIFY

_____

30 31 32 33

NOW: If any additional education is indicated go to EDUCATION ALGORITHM for details. Return to Question 37.

37. WHAT IS THE HIGHEST GRADE OR LEVEL OF EDUCATION YOU HAVE COMPLETED AS OF TODAY?

____(01) SIX OR BELOW

____(02) SEVENTH OR EIGHTH

____(09) NINTH - FRESHMAN

____(10) TENTH -SOPHMORE

____(11) ELEVENTH - JUNIOR

____(12) TWELFTH - SENIOR (HIGH SCHOOL GRADUATE)

____(21) COLLEGE (0-24 CREDITS)

____(22) COLLEGE (25-49 CREDITS)

____(23) COLLEGE (50-74 CREDITS)

____(24) COLLEGE (75 + CREDITS)

____(25) COLLEGE GRADUATE - SPECIFY:

_____

____(99) OTHER - SPECIFY

_____

34 35

38. HAVE YOU EVER PARTICIPATED IN ANY FEDERAL MANPOWER PROGRAM (OTHER THAN IN SCHOOL NYC)?

____(01) NO

YES: (READ LIST-MARK ALL)

____(21) JOB CORPS

____(22) NEW CAREERS

____(23) UPWARD BOUND

____(24) OUT-OF-SCHOOL NYC

____(25) MDTA - INSTITUTIONAL

____(26) MDTA - OJT

____(27) JOBS

____(28) SER

____(29) WIN

____(30) OTHER - SPECIFY

_____

NOW: If additional training is indicated go to EDUCATION ALGORITHM Return to 39.

36 37

38 39

40 41

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39. HAVE YOU EVER HAD ANY FORMAL SKILL OR VOCATIONAL TRAINING SUCH AS JOB TRAINING, APPRENTICESHIP PROGRAM OR FORMAL OJT OR ANY OTHER TRAINING NOT ALREADY MENTIONED?

____(1) YES - SPECIFY

_____

_____

_____

____(2) NO

☐ 42

NOW: If any training is mentioned which includes separable classroom OJT shop training go to EDUCATION ALGORITHM for details. Return to 40.

F. FORMATIVE FACTORS

40. WHAT IS YOUR DATE OF BIRTH?

_____MONTH
_____DAY
_____YEAR ☐ 43 ☐ 44

☐ 45 ☐ 46

☐ 47 ☐ 48

41. HOW MANY BROTHERS AND SISTERS DO YOU HAVE?

NUMBER: _____ ☐ 49 ☐ 50

42. HOW MANY OLDER BROTHERS AND HOW MANY OLDER SISTERS DO YOU HAVE?

OLDER BROTHERS _____ ☐ 51 ☐ 52

OLDER SISTERS _____

☐ 53 ☐ 54

43. WHO DO YOU CONSIDER WAS THE HEAD OF THE HOUSEHOLD IN WHICH YOU LIVED WHEN YOU WERE IN HIGH SCHOOL?

____(1) FATHER
____(2) MOTHER
____(3) STEP-FATHER
____(4) STEP-MOTHER
____(5) GRANDFATHER
____(6) GRANDMOTHER
____(7) OTHER - SPECIFY

_____

☐ 55

44. WHAT WAS THE HIGHEST LEVEL OF EDUCATION OR GRADE (Indicated in 43) EVER COMPLETED?

____(01) THIRD GRADE OR LESS
____(02) FOURTH THROUGH SIXTH
____(03) SEVENTH
____(04) EIGHTH
____(05) NINTH
____(06) TENTH
____(07) ELEVENTH
____(08) TWELFTH - HIGH SCHOOL
____(09) SOME COLLEGE
____(10) COLLEGE DEGREE
____(11) OTHER - SPECIFY

_____

☐ 56 ☐ 57

45. WHAT IS YOUR MARITAL STATUS RIGHT NOW?

____(1) NOW MARRIED
____(2) WIDOWED
____(3) DIVORCED ☐ 58
____(4) SEPARATED
____(5) NEVER MARRIED, SKIP TO 49

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46. HAVE YOU BEEN MARRIED MORE THAN ONCE?

(a) _____(1) ONCE
(b) _____(2) MORE THAN ONCE

☐ 59

47. (a) WHEN DID YOU GET MARRIED - MONTH AND YEAR?

(b) WHAT MONTH AND YEAR DID YOU GET MARRIED THE FIRST TIME?

MONTH _____ ☐☐ 60 61
YEAR _____ ☐☐ 62 63

If respondent was married only once, skip to 49.

48. DID YOUR FIRST MARRIAGE END BECAUSE OF THE DEATH OF YOUR WIFE (OR HUSBAND)?

_____(1) YES
_____(2) NO ☐ 64

(For Male respondents - skip to 50)

49. HOW MANY BABIES HAVE YOU EVER HAD, NOT COUNTING STILLBIRTHS?

NUMBER _____ ☐☐ 65 66

50. WHERE YOU LIVE NOW, WHO DO Y CONSIDER TO BE THE HEAD OF T HOUSEHOLD?

_____(1)SELF
_____(2)HUSBAND
_____(3)FATHER
_____(4)MOTHER ☐ 67
_____(5)STEP-FATHER
_____(6)STEP-MOTHER
_____(7)GRANDFATHER
_____(8)GRANDMOTHER
_____(9)OTHER - SPECIFY

_____

(If person indicated in 50 is the same as 43 - skip to 52)

51. WHAT IS THE HIGHEST LEVEL OF EDUCATION OR GRADE (Indicated in 50) EVER COMPLETED?

_____(01) THIRD GRADE OR LESS
_____(02) FOURTH THROUGH SIXT
_____(03) SEVENTH
_____(04) EIGHTH
_____(05) NINTH ☐ [68 6
_____(06) TENTH
_____(07) ELEVENTH
_____(08) TWELVTH - HIGH SCHO
_____(09) SOME COLLEGE
_____(10) COLLEGE DEGREE
_____(11) OTHER - SPECIFY

_____

52. HOW MANY PERSONS ARE LIVING I THE HOUSEHOLD WHERE YOU NOW LIVE INCLUDING YOURSELF?

NUMBER _____ ☐ [70 71

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53. HOW MANY OF THE PERSONS LIVING WITH YOU ARE 16 YEARS OLD OR YOUNGER? CHILDREN 5 YEARS OLD OR YOUNGER? INFANTS 2 YEARS OLD OR YOUNGER?

16 OR YOUNGER _____ 72 73
5 OR YOUNGER _____ 74 75
2 OR YOUNGER _____ 76 77

54. NOT COUNTING YOURSELF HOW MANY OF THE PERSONS LIVING WITH YOU WORKED LAST YEAR - 1971?

NUMBER _____ 78 79 skip

If number is zero, skip to 56.

55. (a) WHAT IS HIS RELATIONSHIP TO YOU?

(1) HUSBAND
(2) WIFE
(3) FATHER
(4) MOTHER
(5) BROTHER
(6) SISTER
(7) STEP-FATHER
(8) STEP-MOTHER
(9) OTHER

(b) WHAT KIND OF WORK WAS HE DOING?

(c) WHAT KIND OF BUSINESS OR INDUSTRY DID HE WORK IN?

(d) HOW MUCH DID HE EARN BEFORE DEDUCTIONS IN 1971?

01 (Card 3) 08

1st (a) (b) (c) (d) 16 20

2nd (a) (b) (c) (d) 28 32

3rd (a) (b) (c) (d) 40 44

4th (a) (b) (c) (d) 52 56

5th (a) (b) (c) (d) 64 68

6th (a) (b) (c) (d) 76 80

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G. WORKING ATTITUDE AND OBSERVATION

☐☐☐☐☐☐☐☐☐☐
01 (Card 4) 10

NOW: Administer the work relevant attitude scale. While the respondent is working the interviewer should complete the questionnaire based on his own observation. With remaining time check over questionnaire and do as much coding as possible.

56. THE SEX OF THE RESPONDENT?

____(1) MALE ☐ 11
____(2) FEMALE

57. THE RACE OR ETHNIC ORIGIN OF THE RESPONDENT IS?

____(1)WHITE
____(2)MEXICAN-AMERICAN
____(3)BLACK
____(4)OTHER - SPECIFY
_____ ☐ 12
_____

58. ARTICULATENESS SCALE OF RESPONDENTS SPEECH WAS?

(Circle appropriate level)

1 2 3 4 5 ☐ 13
mumbles speaks clearly

1 2 3 4 5 ☐ 14
halting fluent

1 2 3 4 5 ☐ 15
ungrammatical/good grammar

1 2 3 4 5 ☐ 16
unpleasant voice pleasant voice

59. THE ATTITUDE AT THE TIME OF THE INTERVIEW APPEARED?

1 2 3 4 5 ☐ 17
hostile friendly

1 2 3 4 5 ☐ 18
apathetic interested

1 2 3 4 5 ☐ 19
timid confident

60. DOES THE RESPONDENT HAVE ANY OBVIOUS HANDICAPS OR DISABILITIES WHICH WOULD LIMIT THE TYPE OF EMPLOYMENT?

____(1) YES, EXPLAIN
_____
_____

____(2) NO ☐ 20

61. THE DATE OF THE INTERVIEW?

MONTH _____ ☐☐ 21 22
DAY _____
YEAR 19_____ ☐☐ 23 24
☐☐ 25 26

62. INTERVIEWER WAS?

_____ ☐☐ 27 28
(Name)

COMMENT:

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"THE WAY I LOOK AT THINGS"

We are conducting a study of employment programs, and we would like to know your views about various things. We are sure that you will find the subjects interesting. There are, of course, no right or wrong answers -- we just want to know your views.

Now, I'll read the first statement, and I want you to tell me which answer is closest to your point of view. (READ FIRST STATEMENT AND RESPONSES. CIRCLE THE NUMBER OF THE INDICATED RESPONSE. CONTINUE IN THIS MANNER UNTIL FORM IS COMPLETED.)

(Card 4)

1. How lucky do you feel you have been in your life so far?

   1. Very lucky
   2. Somewhat lucky
   3. Somewhat unlucky
   4. Very unlucky

   ☐ 29

2. If you try hard enough, you have a good chance of succeeding in whatever you want to do.

   1. Strongly agree
   2. Agree somewhat
   3. Disagree somewhat
   4. Strongly disagree

   ☐ 30

3. You tell people off when they bug you, even if it means getting into trouble.

   1. Almost never
   2. Seldom
   3. Sometimes
   4. Frequently

   ☐ 31

4. You feel happy

   1. Almost always
   2. Usually
   3. Sometimes
   4. Seldom

5. You feel that you have little influence over the things that happen to you.

   1. Strongly agree
   2. Agree somewhat
   3. Disagree somewhat
   4. Strongly disagree

   ☐ 32

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6. You seem to do things that you regret more often than most people. 33

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

7. You have found that almost everyone likes you. 34

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

8. You keep out of trouble whenever you can. 35

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

9. Teachers have had it in for you and have given you a hard time. 36

1. Frequently
2. Sometimes
3. Seldom
4. Almost never

10. You feel that you are a failure. 37

1. Frequently
2. Sometimes
3. Seldom
4. Almost never

11. You expect to do well in the things you try to do. 38

1. Almost always
2. Usually
3. Sometimes
4. Seldom

12. Most people are crooked when they have the chance. 39

1. Strongly disagree
2. Disagree somewhat
3. Agree somewhat
4. Strongly agree

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13. During your spare time you have something to do that you like doing. ☐ 40

1. Almost always
2. Usually
3. Sometimes
4. Seldom

14. You feel that you have little influence over the things that happen to you. ☐ 41

1. Almost always
2. Usually
3. Sometimes
4. Seldom

15. You get even with people who wrong you as soon as you can. ☐ 42

1. Seldom
2. Sometimes
3. Usually
4. Almost always

16. You don't get much fun out of life. ☐ 43

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

17. Becoming a success is mainly a matter of luck; hard work doesn't help very much. ☐ 44

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

18. Most work is dull and boring. ☐ 45

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

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19. You find that you dislike people. ☐ 46

1. Frequently
2. Sometimes
3. Seldom
4. Almost never

20. You feel that you are as capable and as smart as most other people. ☐ 47

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

21. The wise person lives for today, and lets tomorrow take care of itself. ☐ 48

1. Strongly disagree
2. Disagree somewhat
3. Agree somewhat
4. Strongly agree

22. When you think about your future, what are your chances of becoming a respected and law-abiding member of your community? ☐ 49

1. Excellent
2. Reasonably good
3. Not very good
4. Very unlikely

23. You are generally enthusiastic about new plans. ☐ 50

1. Strongly disagree
2. Disagree somewhat
3. Agree somewhat
4. Strongly agree

24. You lose your temper ☐ 51

1. Frequently
2. Sometimes
3. Seldom
4. Almost never

25. Your chances of having a happy home life in the future are ☐ 52

1. Very unlikely
2. Not very good
3. Reasonably good
4. Excellent

26. You would describe yourself as self-confident. ☐ 53

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

27. It is hard to get ahead without breaking the law now and then. ☐ 54

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

28. How many enemies do you feel you have? ☐ 55

1. A great many
2. Some
3. A few
4. Almost none

29. You would describe yourself as cautious. ☐ 56

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

30. How often do you feel like smashing things? ☐ 57

1. Almost never
2. Seldom
3. Sometimes
4. Frequently

31. Most people cannot be trusted. ☐ 58

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

32. A high school education is worth all the time and effort it requires. ☐ 59

1. Strongly agree
2. Agree somewhat
3. Disagree somewhat
4. Strongly disagree

33. Most bosses have it in for you and give you a hard time. ☐ 60

1. Strongly disagree
2. Disagree somewhat
3. Agree somewhat
4. Strongly agree

34. If you felt you needed a couple of weeks' vacation, you would take the vacation even if it meant losing your job.

    1. Strongly agree
    2. Agree somewhat
    3. Disagree somewhat
    4. Strongly disagree

☐ 61/sk
o

JOB ALGORITHM

1. Select the classification code. Record in column marked Class.

   J For all employment except NYC for both high school and post high school.

   N For NYC position

2. WHAT MONTH AND YEAR DID YOU START THIS JOB?

3. WHAT MONTH AND YEAR DID YOU LEAVE THIS JOB? Record this info on the time line in the row marked Employed referenced by (N)----------(N) where the Ns refer to the Job Bo. (Col. 1), Ns are placed in the starting and ending months and the line connecting them goes through all months this job was held.

4. WHAT KIND OF WORK WERE YOU DOING? Record in Occupation Column.

   N (for example: teacher aide, library aide, custodial aide, etc.)

   J (for example: gas station attendant, grocery clerk, waitress, filing clerk, etc.)

5. WHAT KIND OF BUSINESS OR INDUSTRY DID YOU WORK FOR?

   For NYC jobs ask:

   WHERE DID YOU WORK? Record in Industry column.

   N (for example: NYC Office, school, hospital, etc.)

   J (for example: gas station, grocery store, restaurant, etc.)

6. HOW MANY HOURS A WEEK DID YOU USUALLY WORK? Record actual hours in column marked Hr/Wk.

7. HOW MUCH DID YOU USUALLY EARN AT THIS JOB BEFORE DEDUCTIONS? Record as given in dollars per unit, such as $1.90/hr, $90/wk or $220/mo, in column marked Rate.

8. HOW DID YOU FIND OUT ABOUT THIS JOB? Record in column marked How Found.

9. WHY DID YOU LEAVE THIS JOB? Record in column marked Reason For Leaving.

EDUCATION ALGORITHM

1. Place an E in the first column (the one headed Class) of the job list.

2. The question sequence of the Education Algorithm can be called from several places in the questionnaire. You should know from these places the general nature of the education or training (* refers to this general description). Explain to the respondent you wish to find out more about this education or training. Enter the name of the school in the column headed Name if it has already been given and skip to 4. Otherwise ask 3.

3. WHAT WAS THE NAME OF THE SCHOOL?

   Record as given in the column headed Name of the job list.

4. WHAT WAS THE TYPE OF TRAINING YOU RECEIVED?

   For college ask:

   WHAT WAS YOUR COLLEGE MAJOR?

   Record as given in column headed Type of the job list.

5. WHAT MONTH AND YEAR DID YOU START * ?

6. WHAT MONTH AND YEAR DID YOU LEAVE * ?

   Record this information in the education row referenced by (N)——(N) on the time line where N refers to the line number used to describe the education or training in the job list, and the N's occupy the starting and ending months of education or training.

7. HOW MANY HOURS PER WEEK DID THE TRAINING USUALLY RUN?

   For college ask:

   HOW MANY CREDIT HOURS DID YOU CARRY?

   Record as given in column marked Hr/wk.

8. DID YOU COMPLETE THE PROGRAM?

   Record Yes or No in column headed Exit of the job list.

9. HOW DID YOU FIND OUT ABOUT * ?

   Record in column marked How Found.

10. If question 8 answered Yes, place a 1 in column marked Reason for Leaving and return to main questionnaire (or Gap Algorithm). Otherwise ask: WHY DID YOU LEAVE? Record as given in column headed Reason for Leaving. Return to point where this Algorithm was called.

GAP ALGORITHM

1. The question sequence included in the Gap Algorithm is used in three circumstances: (a) to provide information about labor force activities during dropout periods (question 11); (b) to complete the high school record (question 25) and (c) to fill in the labor force history for 1971 (question 30c(1) and 31d(1)). Explain to the respondent what period you wish to investigate.

2. WHAT WERE YOU DOING BETWEEN (MONTH/YEAR) AND (MONTH/YEAR) - WORKING OR SOMETHING ELSE?

   (1) WORKING. Go to Job Algorithm. Return here to 9 in the Gap Algorithm.

   (2) GOING TO SCHOOL. Go to Education Algorithm. Return here to 5 in the Gap Algorithm.

   (3) LOOKING FOR WORK. Skip to 7.

   (4) UNABLE TO WORK. Record the gap with ↔ in the NILF row of the time line. Skip to 9.

   (5) OTHER RESPONSES. Next question.

3. WAS THERE ANY REASON WHY YOU WERE UNABLE TO WORK DURING THIS PERIOD?

   (1) YES. Ask: WHAT WAS THE REASON?

   In the Armed Forces.
   In Jail, Mental Institution or Reform School.
   Sick, Injured or otherwise disables.
   At home, taking care of family.
   Other nonfrivolous reasons.

   (2) NO. Skip to 5.

4. WERE YOU (GIVEN REASON) FOR THE ENTIRE PERIOD?

   (1) YES. Record the gap with a ↔ in the NILF row of the time line. Skip to 9.

   (2) NO. Ask: WHICH MONTHS WERE YOU ACTUALLY UNABLE TO WORK? Record the indicated months with a ↔ in the NILF row of the time line. Go back to question 2 for remaining months.

GAP ALGORITHM (Cont'd)

5. DID YOU EVER WORK AT A JOB DURING THIS PERIOD?

   (1) YES. Go to Job Algorithm. Return to here in the Gap Algorithm.

   (2) NO. If question 2 answered: GOING TO SCHOOL, skip to 9. Otherwise go to next question.

6. DID YOU EVER SERIOUSLY LOOK FOR A JOB IN THIS PERIOD?

   (1) YES. Next question.

   (2) NO. Record the gap with ↔ in the NILF row of the time line. Skip to 9.

7. WHERE DID YOU LOOK? (do not read the list)

(1)	SCHOOL EMPLOYMENT SERVICE	Next Question
(2)	PUBLIC EMPLOYMENT SERVICE	
(3)	PRIVATE EMPLOYMENT AGENCY	
(4)	EMPLOYER	
(5)	NEWSPAPER ADS	
(6)	FRIENDS OR RELATIVES	
(7)	OTHER SERIOUS ATTEMPTS	
(8)	NO WHERE.	Record with a ↔ in the NILF row. Skip to 9.
(9)	OTHER INDEFINITE RESPONSE	

8. WERE YOU LOOKING FOR WORK DURING THE ENTIRE (number of months) MONTH PERIOD?

   (1) YES. Record the gap with a ↔ in the unemployed row. Next question.

   (2) NO. Ask: WHICH MONTHS WERE YOU ACTIVELY LOOKING FOR WORK? Record the months indicated as unemployed. In the remaining months of the gap record a ↔ in the NILF row. Next question.

9. (Follow Instructions) Survey the Gap again; if any gap still remains, go back to step 1 of the Gap Algorithm and fill in the space. Otherwise, return to the main questionnaire.

APPENDIX B

APPENDIX B

ADDITIONAL DATA OBTAINED FROM THE SAMPLE BUT NOT INCLUDED IN THE STATISTICAL ANALYSIS

Characteristic	Control	Experimental
Siblings	5.902	5.767
Eldest Sibling	19.5%	26.7%
Current Employment Status		
Employed	68.3	50.9
Unemployed	9.8	22.4
NILF	22.0	26.7
Current Unemployment Rate	14.3	30.6
Total Attitude Score		
Lower than 97	11	25
97 to 105	8	27
105 to 112	14	25
112 and higher	6	26
Average Attitude Score	103.79	104.70
Optimism Score		
Lower than 31	10	30
31 to 34	9	27
34 to 37	11	25
37 and above	9	21
Self-Confidence Score		
Lower than 31	10	30
31 to 34	9	27
34 to 37	11	25
37 and above	9	21
Average Self-Confidence Score	33.87	34.54
Unsocialized Attitude Score		
Lower than 19	7	29
19 to 23	15	20
23 to 27	8	29
27 and above	9	25
Average Unsocialized Attitude Score	24.05	23.43

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